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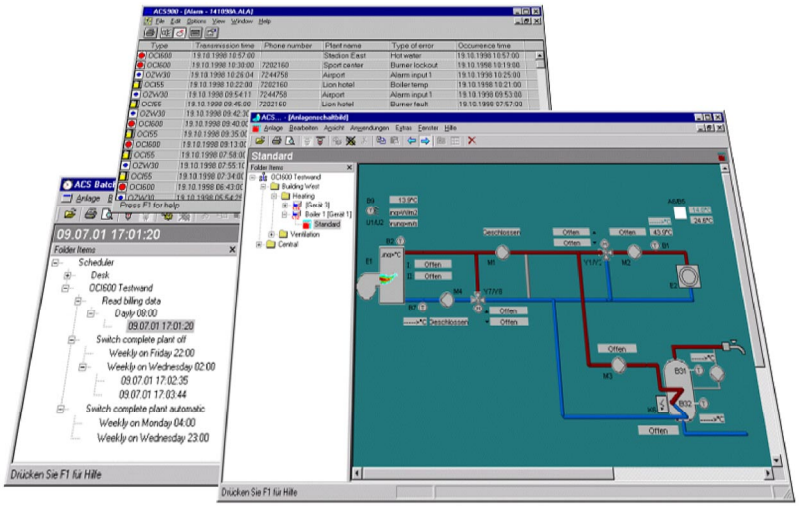

ACS Plant Operating Software

ACS Operating

ACS Service

Operating Instructions

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1 Introduction

1.1 Overview

ACS7... is a PC software package for remote operation, monitoring and commissioning of heating, ventilation and district heating plant and remote readout of consumption data.

Use:

- Remote management with central communication units type OCI600 and OCI611:
  - Remote operation and monitoring of heating plant whose devices (controllers, pulse adapters, temperature sensors / adapters, digital input modules and relay modules) are connected via LPB (Local Process Bus)
- Remote management with M-bus central units type OZW10 and OZW111:
  - Remote operation and monitoring of M-bus-compatible devices (controllers and meters) in community and district heat substations
  - Acquisition of consumption data of M-bus-compatible meters for consumption cost billing
- Service software via communication interface type OCI69:
  - Diagnosis and commissioning of LPB controllers

Among other items, the ACS7… software package contains the two following programs a description of which is given in the present Operating Instructions:

- ACS Operating: Operating software
- ACS Service: Service software

Depending on the selected type of ACS7… software package, the Operating software and Service software contain the following applications:

- Plant diagram: Visualization and remote operation of data points with graphic display of plant
- Popcard: Visualization and remote operation of all transmitted data points of the connected devices
- Online trend: Acquisition and presentation of the dynamic behavior of selected data points with connection to the plant
- Offline trend: Acquisition and presentation of the dynamic behavior of selected data points without connection to the plant
- File transfer: Transmission and storage of files of the central units and memory cards
- Parameter settings: Reading and editing the setting parame ters of a device in tabular form
- Commissioning report: Logging the setting values of individual devices, device groups or the entire plant

If this is the first time you work with the ACS Operating or ACS Service software, we recommend you to proceed with chapter The first steps.

1.2 System requirements

PC component	Minimum requirement
Processor	Pentium 100 MHz
RAM	32 MB
Hard disk	200 MB available memory Recommended: Additional 20 MB per plant
Screen	VGA standard driver 800 x 600, 256 colors Recommended: SVGA standard driver 1028 x 768

Ports	Serial COM1…COM4, up to 9,600 Baud (directly or via modem) Parallel port for copy protection
Operating system	Windows 98, second edition Windows NT 4.0, service pack 6 Windows 2000
Diskette drive	3½", 1.44 MB, for diskette with log file
CD-ROM drive	Single

1.3 Languages

When starting the ACS..., you can choose the **language** you would like to use. You can also decide whether or not you want to see the dialog for choosing the language each time the program is started up.

If the **Language / Sprache** window does not appear when starting the ACS…, choose the "Tools" menu – **Language selection on startup**. In that case, when closing the ACS… and starting up again, the dialog for choosing the language will appear again.

1.4 Installing the software

The procedure for installing the ACS7… software package is described in the ACS7… Installation Instructions, which are contained in the package with the CD.
For information about commissioning the software, refer to chapter The first steps.

1.5 Licensing

1.5.1 Overview of licensing

The ACS Operating software is a scalable software program. In accordance with the license, certain functions are available, other functions are permanently disabled, and the maximum plant size is limited. The functions currently available can be viewed on the "Tools" menu **– Licensing**. The dialog on the screen enables you to remove or extend a license.
The license for the dongle is stored on the license diskette Dongle and license diskette constitute part of the scope of delivery of the ACS7... software package. The ACS700 contains neither the dongle nor the license diskette.
For information about extending and removing licenses, refer to the following chapters:

- Extending a license
- Removing a license

The ACS Service software provides predefined functionality. In contrast to the ACS Operating software, the ACS Service software cannot be used for making modem connections.
The number of plants are unlimited in both programs.

Functions provided by the ACS Service software:

The ACS Service software has fixed functionality and is contained in all software packages.

Application	Description
Popcard:	Visualization and remote operation of all transmitted data points of the connected devices
– Standard	– Predefined pages and data points of each device
– User-defined	– Pages and data points as defined by the user
Online trend:	Acquisition and presentation of the dynamic behavior of

	selected data points of the plant with connection to the plant
Parameter settings:	Reading and editing the setting parameters of a device in tabular form
Commissioning report:	Logging the setting parameters of individual devices, device groups or the entire plant
Plant navigation:	Plant view in the form of a tree structure. The makeup of the tree structure corresponds to the addressing of the devices
Connection:	Directly with standard null modem cable

Functions provided by the ACS Operating software:

The ACS Operating software provides a number of applications, depending on the selected type of software package.

Application	Software package						Description
	ACS700	ACS712	ACS713	ACS715	ACS741	ACS785	
Plant diagram							Visualization and remote operation of data points with plant graphic
– Standard			●	●		●	Predefined graph and data points of each device
– User-defined	●	●	●	●	●	●	Graph, data points and interconnections as defined by the user
Popcard							Visualization and remote operation of all transmitted data points of the connected devices
– Standard	●	●	●	●	●	●	Predefined pages and data points of each device
– User-defined	●	●	●	●	●	●	Pages and data points as defined by the user
Trend							Acquisition and presentation of dynamic behavior of selected data points
– Online				●		●	With connection to the plant
– Offline		●	●	●		●	With no connection to the plant
File transfer			●	●	●	●	Transmission and storage of files of the central units and memory cards
Parameter settings	●	●	●	●	●	●	Reading and editing the setting parame ters of a device in tabular form
Commissioning report			●	●		●	Logging the setting values of individual devices, device groups or the entire plant
Plant navigation							Plant view in the form of a tree structure
– Device view	●	●	●	●	●	●	The view corresponds to the address ing of the devices
– Plant view			●	●		●	The view is determined by the

							user
Connections							Type of connections
– Directly	●	●	●	●	●	●	With standard null modem cable
– Modem	●	●	●	●	●	●	Via telephone modems

Number of devices per plant:

With the ACS Operating software and the Batchjob software, the number of devices per plant are limited. By contrast, the number of devices are unlimited with the Alarm software and the Service software.
To limit the number of devices, a credit is available with each standard package supplied. Every device connected to the plant charges that credit with a device-specific value. The number of devices that can be operated are limited by the credit amount. Additional credits can be ordered separately.

Software	**Credit per type of software package**					
	ACS700	**ACS712**	**ACS713**	**ACS715**	**ACS741**	**ACS785**
Operating software:	200	200	200	200	1300	3900
Batch job software:				200		3900

Type of product	**Device-specific credit**
OCI600, OCI611, OZW10, OZW111	10
SIGMAGYR® RVL…, RVP…, RVD…	8
SONOGYR®, SONOHEAT®	3
MEGATRON2®, VOLUTRON2®	2
MEMOTRON®, AEW21.2, PadpulsM1	1
OCI69	0
Devices without standard device description	8

1.5.2 Extending a license

To install some other license or to extend an existing license, choose the "Tools" menu **– Licensing**. From the **Licensing** dialog, choose the **Update** button. For the license to be installed, there must be a dongle fitted to the parallel port and the relevant license diskette must be inserted in drive a:\.

1.5.3 Removing a license

If you wish to remove a license, choose the "Tools" menu **– Licensing**. From the **Licensing** dialog, choose the **Remove license** button. In that case, the installed software can only be operated with the basic functionality provided by the ACS700.

1.5.4 License diskette

The license diskette contains your individual license file with the file extension *.key. The serial number of the license diskette must agree with the serial number of the dongle connected to the parallel port.

2 Processes

2.1 Overview of the process

This chapter describes the general process when working with the software:

Starting the software:	Describes the way the ACS… is started up.
The first steps:	Describes the process from creating a plant, to working with the applications.
Working with connections:	Describes the way connections to plants are prepared, made and closed.
Working with a plant:	Describes working with the plant to which a connection can be established.
Navigating through a plant:	Describes how you can find devices or data points in the various applications.

2.2 Starting the ACS...

2.2.1 Starting the ACS...

Starting up under Windows 98 / NT:

1. Choose the **Start** button and then point to **Programs**.
   Point to the **ACS** folder which contains the **ACS Operating** and the **ACS Service** programs. Then, choose the program you want to use.
   Depending on the type of installation, you can also start the programs directly from your Desktop or via Windows Explorer.
2. After starting the ACS..., the **Language / Sprache** dialog appears, where you can choose the language you would like to work with.
3. If this is the first time you start the program, the passwords to be used must be defined next. For more information, refer to chapter Entering the password.
4. Enter the password: Please key in a valid password.
5. If this is the first time you start the program, you need to make a few configurations before you can work with a plant. For more detailed information, refer to chapter The first steps.
   If you have already made these configurations and you would like to work with a plant, refer to chapter Processes for working with a plant.

For more information, refer to the following chapters:

Changing the language
Entering the password

2.2.2 Changing the language

The language cannot be changed while the ACS... is running. If you want to change the language, you must close the ACS... and then make a new start.

Procedure:

From the "Tools" menu, choose **Language selection on startup**, so that the **Language / Sprache** dialog will appear the next time the ACS… is started up.

2.2.3 Entering the password

Depending on the password you enter, the system decides on which user level you are allowed to work. The following differentiation is made:

Administrator:	With the administrator password, you can assign passwords to the various user levels – "Tools menu" – **Password...**. You can access all data points on the service levels of the various devices.
Enduser:	The enduser password enables you to access all data points on the device and end user level.
Service:	The service password enables you to access all data points on the device service level.
OEM:	The OEM password enables you to access all data points on the enduser, service and OEM level.

If such passwords have been preassigned, the **Log on** dialog appears when starting the ACS... , where you need to enter a valid password.
If the program has already been started up, you can also change from one user level to another at a later time by choosing the "Tools" menu – **Log on…**.

2.3 The first steps

2.3.1 The first steps

The first steps

This chapter describes the process from creating a plant to working with the applications.

After starting the ACS..., you see the window with the main menu.

Before a connection to a plant can be opened, you need to carry out some preparatory work:

1. Prepare the connection to the plant

Then:

2. Create the plant.
3. Establish the connection to the plant.
4. When the connection to the plant has been established, the data of the devices contained in the plant must be transferred to the PC.
5. Upload and change the data of the devices.
6. Close the connection to the plant again after work with the plant has been completed.

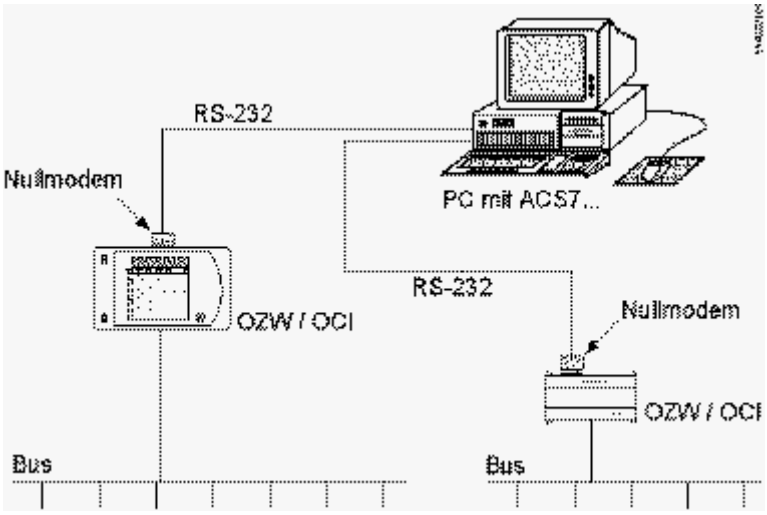
For more information, refer to the following chapters:

- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.2 Prepare the connection to the plant

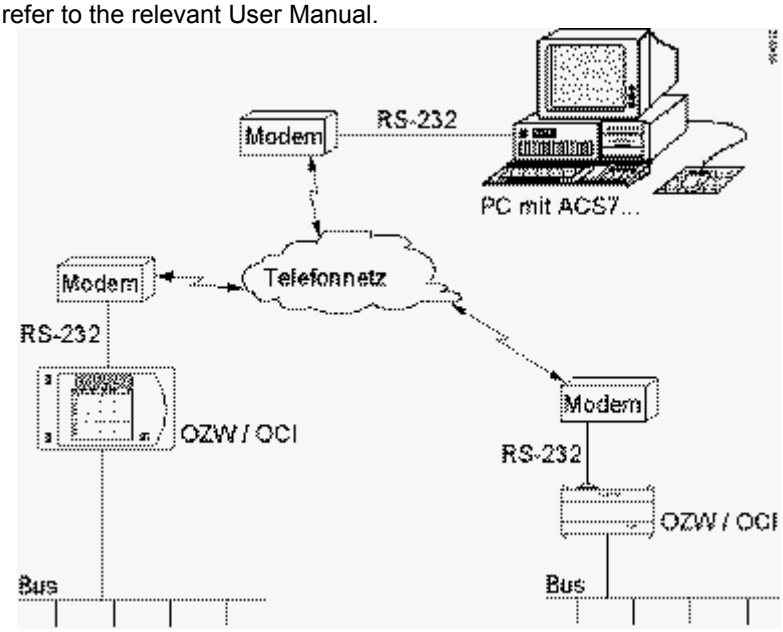
Communication with the central units can take place either directly or via modem.

In the case of a direct connection, a null modem is required between central unit and PC:



In the case of a connection via the telephone network, a Heyes-compatible modem is required on both sides:

Before a modem connection can be established, first the central communication unit for modem communication must be parameterized. For detailed information on the subject, refer to the relevant User Manual.



After the central communication unit and the PC have been connected to the modems, define on the "Tools" menu – **Connections...** the type of device that has been connected to the respective COM port of the PC:

- On the respective COM port, choose the type of **Driver** that suits the connected device
- If the connected device is a modem, first load the appropriate modem driver. For that purpose, choose the **Load...** button
- If you do not find a suitable modem driver, try to create a new one. For that purpose, choose the **New...**. button. Assign a name for the new modem driver, store it without making any further changes and try to establish a connection with that modem driver
- If the connection to the newly created modem driver cannot be opened, you need to adapt the driver according to the information given in the modem's User Manual. For that purpose, choose the **Edit...** button

Then, create the plant.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.3 Creating a plant

If this is the first time you work with the program, you can define where the plant file shall be stored: Choose the "Tools" menu – **Options...** and change the **Default plant path**. In the future, new plants will always be stored in that directory and existing plants will be opened from there. We recommend to leave that path unchanged.

1. To create a new plant, choose the "Plant" menu – **New** – **Plant…**.
2. The **Save As** dialog is opened: Enter the required **File name** for the plant file and continue with **Save**.
3. The **Plant properties** dialog is opened: Under **General**, enter the plant name and a **description** of the plant.
   Under **Communication**, choose the **Server type** to which you want to establish a connection.

   Depending on the selected type of central unit, additional entry boxes appear that must be completed now:
   - **COM port** (all types of central units): This is the communication port of the PC that shall be used by the PC to communicate with the central unit. Note: The connections via this COM port must have been configured according to chapter Preparing the connection to a plant
   - **Phone no. plant** (OCI600, OCI611, OZW10, OZW111): This is the phone number under which the central unit can be reached via modem. For direct connections not made via modem, there is no need to enter a phone number. Please ensure you do not forget the exchange code, the area code or other parts of the phone number
   - **Return call** (OZW10): When you select the return call, first the connection to the central unit is opened. Then, the connection is cut and the central unit makes a return call. The largest part of the telephone charges is billed in this way. For direct connections, the return call should be disabled
   - **Code number** (OCI600, OCI611, OZW10, OZW111): Access to a central unit can be protected by a code number. The code number is stored in the central unit: For detailed information, refer to the central unit's Operating Manual. To establish a connection to the central unit, the code number in the central unit and that in the PC must agree. In that box, enter the code number of the PC. When supplied, central units carry the standard code number 01
   - **Optical / M-bus** (M-bus): Depending on whether the connection to the M-bus is established via the opto head (optical) or directly via an RS-232 / M-bus converter, such as the WZC-S250
   - **Search address / Bus address** (M-bus): If only one device is connected to the M-bus, the connection can be established via **Search address**. The program searches the connected device automatically. If several devices are connected to the M-bus, you must enter the primary address of that device under **Bus address**

   After the entries have been made, you can close the dialog by choosing the **OK** button.

The settings made in the dialog can be changed at any time via the "Plant" menu – **Plant properties...**

4. The plant file is now completed. In the future, all information about the plant will be stored in that file. The title bar of the program shows you the name of the program and the name of the plant currently opened (e.g. Plant.plx).

Now, a connection to the plant can be established.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.4 Establishing a connection to a plant

Before a connection to a plant can be established, a plant file must have been created on the PC. That file must contain all data relating to the connection: For more information, refer to chapter Creating a plant.
To establish the connection to a plant, choose the "Plant" menu – **Connection on**. The connection will then be made. If the connection cannot be opened, check the settings according to chapters Preparing the connection to a plant and Creating a plant.

Now, the information about the devices contained in the plant must be transferred to the PC.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.5 Transferring the data of the plant devices to the PC

After the plant has been created and the connection to the plant has been established, the information about the devices contained in the plant must be transferred to the PC.

1. Choose the "Plant" menu – **Refresh device list**. The program then uploads to the PC all plant data available in the central unit.
2. Check to make sure all devices are contained in the device list:
   A. Check to ensure that the device view is currently in use: "View" menu – **Device view**.
   B. Start the "Popcard" application via the "Applications" menu – **Popcard.**
   C. In the **Popcard** window, the **Device view** to the left shows you the devices contained in the plant:
   Check now if you can find all devices and if the device type has been correctly identified (identifiable by the symbol). Depending on the type of central unit, the device view is structured in the form of a tree: The nodes (branches) can be opened or closed by clicking **+** / **-**. Only then will be devices become visible.

Note:

The data uploaded contain information about the type of device and the selected plant diagram. Based on this information, the applications will automatically show pictures and data points. If you change the plant diagram of a device, you need to transfer the

new information to the PC. This takes place via the "Plant" menu – **Refresh reference data points**.

When all devices are listed, you can upload and change data of devices and work with other applications of a plant.
If you wish to make use of more convenient navigation through the plant, refer to chapter Editing a plant view, where you will find more detailed information.

If not all the devices appear, the missing devices have not been identified by the central unit, which means that they have not been entered in the central unit's user directory.
Entry of the devices in the user directory depends on the type of central unit:

- OCI69, OCI700 or M-bus: These types of communication interfaces have no user directory. For this reason, the ACS… software automatically searches on the bus for the devices installed in the plant
- OCI600: In the device view, open the node **Device type central unit, 0 – Segment 0 – Device: x – Standard – Device directory** and enter in the right half of the window the name, device number and segment number. Note: It may take up to 10 minutes for the OCI600 to identify the parameterized device
- OCI611: To create the device directory, there are 3 choices available:
  A. Press the button on the OCI611 to start the device search run. Note: The search run is completed only when the relevant LED on the OCI611 stops flashing.
  B. In the device view, open node **Device type central unit, 0 – Segment 0 – Device: x – Standard – Device directory** and enter in the right half of the window the name, device number and segment number. Then, set data point **Update device data** to **On**. Note: The OCI611 has identified all devices only when data point **Update device data** switches automatically back to **Off.**
  C. On the page mentioned under B, you can also start the device search run by setting data point **Create device list** to **On.** Note: The search run is completed only when the relevant LED on the OCI611 stops flashing.
- OZW10: In the device view, open node **Device 000 – Standard – Setup M-bus**. Choose the **Addressing mode on the M-bus** and **Baud rate on the M-bus** you want to use to search for devices on the M-bus. Choose the **Number of M-bus devices** that shall be found on the M-bus (excluding the central unit). Set data point **Delete device list** to **Yes** and then data point **Update device data** to **Yes**. The OZW10 now starts the device search run. Note: The search run is completed only when the **Number of M-bus devices (actual)** is identical to the **Number of M-bus devices** (expected number). In the case of larger M-bus systems, this process may take any time from several minutes to one hour
- OZW111: Press the button on the OZW111 to start the device search run. Note: The search run is completed only when the relevant LED on the OZW111 stops flashing

If, at a later time, you change the address of a device, or you add a new device to the plant, you need to revise the central unit's user directory.
For more detailed information about the structure of the user directory in the central units, refer to the documentation of the relevant central unit or the Basic Documentation of the respective system.
If a central unit cannot find a device, it may well be that no bus address has been set on the device, that the set address is already used by some other device, or that the communication from the central unit to the device is interrupted.
For information about setting the device's bus address, refer to the installation instructions of the respective device.
For information about fault tracing in the bus system, refer to the Basic Documentation of the respective system or the documentation of the central unit.

If the user directory in the central unit has been revised, you must again transfer the data of the devices contained in the plant to the PC: Choose the "Plant" menu – **Refresh device list**.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.6 Uploading and changing the data of the devices

After the data of the devices contained in the plant have been transferred to the PC and the devices have been identified, you can upload, change and log the data of these devices.
For that purpose, from the "Applications" menu, choose **Plant diagram...**, **Popcard...**, **Online trend..., Offline trend..., File transfer...**, **Parameter settings...** or **Commissioning report...**.

After work with the plant has been concluded, the connection to the plant can be aborted again.

For more information about the various applications, refer to the following chapters:

- Plant diagram:
  Visualization and remote operation of data points with graphic display of plant.
- Popcard:
  Visualization and remote operation of all transmitted data points of the connected devices.
- Online trend:
  Acquisition and presentation of the dynamic behavior of selected data points with connection to the plant.
- Offline trend:
  Acquisition and presentation of the dynamic behavior of selected data points with no connection to the plant.
- File transfer:
  Transmission and storage of the files of the central units and memory cards.
- Parameter settings:
  Uploading and editing the setting parameters of a device in tabular form.
- Commissioning report:
  Logging the setting values of individual devices, device groups or the entire plant.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.3.7 Aborting the connection to a plant

From the "Plant" menu, choose **Connection off** to abort a connection to a plant.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.4 Working with connections

2.4.1 Working with connections

Preparing a connection
Establishing a connection
Aborting a connection

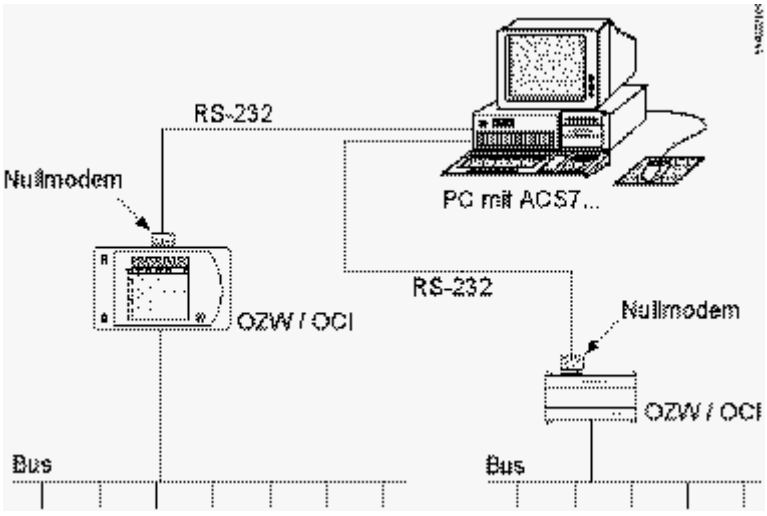
For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

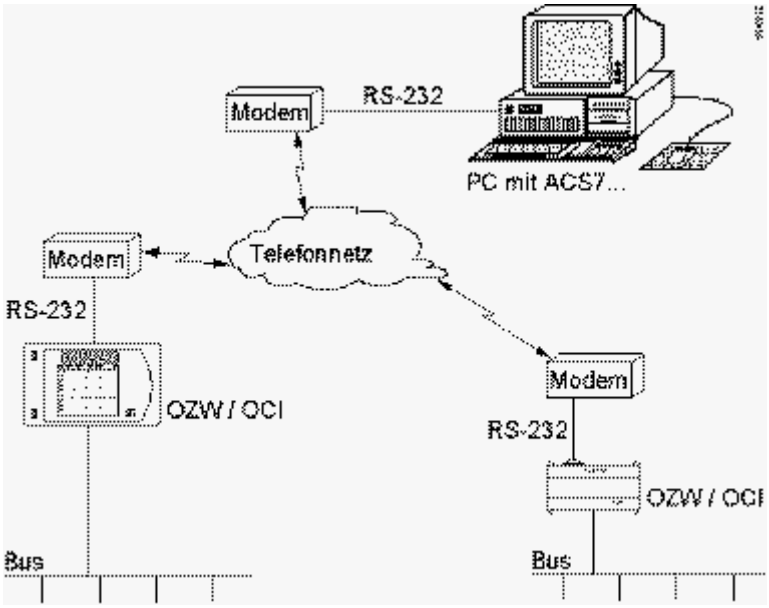
2.4.2 Preparing a connection

The communication to the central units can take place either directly or via modem.

In the case of a direct connection, a null modem is required between central unit and PC:



In the case of a connection via the telephone network, a Heyes-compatible modem is required on each side:
Before a modem connection can be established, first the central communication unit for modem communication must be parameterized. For detailed information, refer to the modem's User Manual.



After the central communication unit and the PC have been connected to the modems, define on the "Tools" menu – **Connections...** the type of device that has been connected to the respective COM port of the PC:

- On the respective COM port, select the type of **Driver** that suits the connected device
- If the connected device is a modem, first load the appropriate modem driver: For that purpose, choose the **Load...** button
- If you do not find a suitable modem driver, try to create a new one. For that purpose, choose the **New...**. button. Assign a name for the new modem driver, store it without making any further changes and try to establish a connection to that modem driver
- If the connection cannot be opened with the newly created modem driver, you need to adapt the driver according to the information given in the modem's User Manual. For that purpose, choose the **Edit...** button

Then, the plant can be created.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.4.3 Establishing a connection

Before a connection to a plant can be established, a plant file must have been created on the PC. That file must contain all data relating to the connection: For detailed information, refer to chapter Creating a plant.
To establish a connection to a plant, choose the "Plant" menu – **Connection on**. The connection will be established. If the connection cannot be opened, check the settings according to chapters Preparing a connection and Creating a plant.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant

- Working with the devices
- Applications

2.4.4 Aborting a connection

From the "Plant" menu, choose **Connection off** to abort a connection to a plant.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5 Working with a plant

2.5.1 Working with a plant

For every plant, the program generates a plant file. The properties of that plant can be changed, or the plant file can be deleted again. For more information, refer to the following chapters:

- Creating a plant
- Opening a plant
- Deleting a plant
- Plant properties

After the plant has been created and the connection to the plant has been established, the information about the devices contained in the plant must be transferred to the PC:

- Updating the device list

The generated device list can be used for navigating through the plant by means of the device view. For more convenient navigation, it is also possible to generate a user-defined plant view:

- Editing the plant view

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5.2 Creating a plant

If this is the first time you work with the program, you can choose where the plant file shall be saved. Choose the "Tools" menu – **Options...** and change the **Default plant path**. In the future, new plants will then always be saved in that directory and existing plants opened from there. We recommend to leave that path unchanged.

1. Choose the "Plant" menu – **New** – **Plant…** to create a new plant.
2. The **Save As** dialog is opened: Enter the required **File name** of the plant file and continue with **Save**.
3. The Plant properties dialog is opened where you can change the description of the plant and the communication parameters.

4. The plant file is now completed. In the future, all information about the plant will be stored in that file. The title bar of the program shows you the name of the program and the plant currently opened (e.g. Plant.plx).

Now, a connection to the plant can be established.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5.3 Opening a plant

All information about the plants is stored in the plant files.

A. Choose the "Plant" menu – **Open...** to open existing files. A dialog appears showing all existing plants saved on the plant path. Choose the "Tools" menu – **Options...** to define the plant path and change the **Default plant path**.

B. The "Plant" menu shows the 4 plant files opened last. These plant files can be opened directly via the respective menu items.

When starting the ACS…, the plant opened last is automatically opened.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5.4 Deleting a plant

All information about the plant is stored in the plant file. Choose the "Plant" menu – **Delete** to delete that file.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5.5 Plant properties

All information about the plant is stored in the plant file, including a description of the plant and of the communication parameters.
Select the "Plant" menu – **Plant properties...** to change these settings.
The **Plant properties** dialog is opened: Under **General**, enter the plant name and a **description** of the plant.
Under **Communication**, select the **type of central unit**, to which you want to establish a connection. The type of central unit can only be selected when creating a new plant.

Depending on the type of central unit, additional entry boxes appear that you can change now:

- **COM port** (all types of central units): This is the communication port of the PC that shall be used by the PC to communicate with the central unit. Note: The connections via this COM port must have been configured according to chapter Preparing the connection to a plant
- **Phone no. plant** (OCI600, OCI611, OZW10, OZW111): This is the phone number under which the central unit can be reached via modem. For direct connections not made via modem, there is no need to enter a phone number. Please ensure you do not forget the exchange code, the area code or other parts of the phone number
- **Return call** (OZW10): When you select the return call, first the connection to the central unit is opened. Then, the connection is cut and the central unit makes a return call. The largest part of the telephone charges is billed in this way. For direct connections, the return call should be disabled
- **Code number** (OCI600, OCI611, OZW10, OZW111): Access to a central unit can be protected by a code number. The code number is stored in the central unit: For detailed information, refer to the Operating Manual of the central unit. To establish a connection to the central unit, the code number in the central unit and that in the PC must agree. In that box, enter the code number of the PC. When supplied, central units carry the standard code number 01
- **Optical / M-bus** (M-bus): Depending on whether the connection to the M-bus is established via the opto head (optical) or directly via an RS-232 / M-bus converter, such as the WZC-S250
- **Search address / Bus address** (M-bus): If only one device is connected to the M-bus, the connection can be established via **Search address**. The program searches the connected device automatically. If several devices are connected to the M-bus, you must enter the primary address of that device under **Bus address**

After the entries have been made, you can close the dialog by choosing the **OK** button. The settings made in the dialog can be changed at any time via the "Plant" menu – **Plant properties...**

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.5.6 Updating a device list

After the plant has been created and the connection to the plant has been established, the information about the devices containd in the plant must be transfered to the PC.

1. Choose the "Plant" menu – **Refresh device list**:. The program uploads to the PC all plant data available in the central unit.
2. Check to ensure all devices are contained in the device list:
   A. Check to ensure that the device view is currently in use: "View" menu – **Device view**.
   B. Start the "Popcard" application via the "Applications" menu – **Popcard...**
   D. In the **Popcard** window, the **Device view** to the left shows you the devices available in the plant:
   Check now if you can find all devices and if the device type has been

correctly identified (identifiable by the symbol). Depending on the type of central unit, the device view is structured in the form of a tree: The nodes (branches) can be opened or closed by clicking **+** / **-**. Only then will be devices become visible.

Note:

The data uploaded contain information about the type of device and the selected plant diagram. Based on this information, the applications will automatically show pictures and data points. If you change the plant diagram of a device, you must transfer the new information to the PC: This takes place via the "Plant" menu – **Refresh reference data points**.

When all devices are listed, you can upload and change data of devices and work with other applications of a plant.
If you wish to make use of more convenient navigation through the plant, refer to chapter Editing a plant view , where you will find more detailed information.

If not all the devices appear, the missing devices have not been identified by the central unit, which means that they have not been entered in the central unit's user directory. Entry of the devices in the user directory depends on the type of central unit:

- OCI69, OCI700 or M-bus: These types of communication interfaces have no user directory. For this reason, the ACS… software automatically searches on the bus for the devices contained in the plant
- OCI600: In the device view, open node **Device type central unit, 0 – Segment 0 – Device: x – Standard – Device directory** and enter in the right half of the window the name, device number and segment number. Note: It may take up to 10 minutes for the OCI600 to identify the parameterized device
- OCI611: To generate the device directory, there are 3 choices available:
  A. Press the button on the OCI611 to start the device search run. Note: The search run is completed only when the relevant LED on the OCI611 stops flashing.
  B. In the device view, open node **Device type central unit, 0 – Segment 0 – Device: x – Standard – Device directory** and enter in the right half of the window the name, device number and segment number. Then, set data point **Update device data** to **On**. Note: The OCI611 has identified all devices only when data point **Update device data** switches automatically back to **Off.**
  C. On the page mentioned under B, you can also start the device search run by setting data point **Create device list** to **On.** Note: The search run is competed only when the relevant LED on the OCI611 stops flashing.
- OZW10: In the device view, open node **Device 000 – Standard – Setup M-bus**. Choose the **Addressing mode on the M-bus** and **Baud rate on the M-bus** you want to use to search for devices on the M-bus. Choose the **Number of M-bus devices** that shall be found on the M-bus (excluding the central unit). Set data point **Delete device list** to **Yes** and then data point **Update device data** to **Yes**. The OZW10 now starts the device search run. Note: The search run is completed only when the **Number of M-bus devices (actual)** is identical to the **Number of M-bus devices** (expected number). In the case of larger M-bus systems, this process may take any time from several minutes to one hour.
- OZW111: Press the button on the OZW111 to start the device search run. Note: The search run is completed only when the relevant LED on the OZW111 stops flashing.

2.5.7 Editing a plant view

This function is not contained in all ACS7.. software packages. For more information, refer to capter Licensing.

After the data of the devices contained in the plant have been transferred to the PC and the devices have been identified, you can navigate trough the plant in the various applications using the device view ("View" menu – Device view).
If you wish to make use of more convenient navigation through the plant, you can create your own navigation tree which enables you to access devices and data points faster and more straightforwardly. Choose the "Plant" menu – **Edit plant...**. Then, the **Edit plant** window is opened:

- In the left half of the window, you find the **Plant view** created by you: It consists of nodes (branches) where you have added nodes or devices of the plant
- In the right half of the window, you find all devices that were found when updating the device list and that have not yet been entered in the plant view: **List of non assigned devices**.

To change the **Plant view**, proceed as follows:

1. To add nodes (branches), use the left mouse button to click on the node where you want to insert a subnode. A menu appears, where you choose **Insert node...**.
2. To assign a device to a node, press the left mouse button to click on the respective device on the **List of non assigned devices.** Hold the left mouse button down and drag the device to the node in the **Plant view** where you want to add the device. The device will be assigned to the node by releasing the left mouse button. You can sort the devices on the **List of non assigned devices** by clicking on one of the column heads.
3. To move a device to some other node, use the left mouse button to click on the respective device in **Plant view**. Hold the left mouse button down and drag the device to the node in **Plant view** to which you want to assign the device. The device is assigned to the node by releasing the left mouse button.
4. To delete a device or node, choose the element you want to delete. Use the right mouse button and choose **Delete** or press the **DEL** key. If the selected object is not a device, it will be removed. For this command, you can also use the following button:

5. To assign some other name to a node or device, choose the element you want to rename. Use the right mouse button and choose **Properties...**. In the dialog that appears, the name of the node or the description of the device can be changed.

After the plant view has been created, it can be used for navigating through the applications: "View" menu – **Plant view**.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.6 Navigating through a plant

2.6.1 Navigating through a plant

Select devices or data points from the various applications. To find the devices of a plant, you have two choices:

- You work with the plant view, if you would like to use navigation that is matched to your individual needs

- You work with the device view, if you would like to use bus addressing as a guide, or if the creation of a plant view is not worth the effort

You can print the device view and the plant view.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

2.6.2 Navigating with a plant view

This function is not contained in all ACS7.. software packages. For more information, refer to chapter Licensing.

The plant view is a self-created navigation tool designed to find devices and data points in a plant. For information about the creation of a plant view, refer to chapter Editing a plant view.

To navigate with the plant view, choose the "View" menu – **Plant view**:
The plant view has a tree structure: Nodes (branches) of the tree can be opened or closed by clicking **+** / **–**. Devices are displayed with special self-explanatory symbols.

For more information, refer to the following chapters:

- Navigating with a device view
- Printing a device and plant view
- The first steps
- Working with connections
- Working with a plant
- Working with the devices
- Applications

2.6.3 Navigating with a device view

The device view is a navigation tool designed to find devices and data points in a plant. It is automatically provided after updating the device list.

To navigate with the device view, choose the "View" menu – **Device view**:
The device view is a predefinied tree structure: Nodes (branches) of the tree can be opened or closed by clicking **+** / **–**. Devices are displayed with special self-explanatory symobls.

For more information, refer to the following chapters:

- Navigating with a plant view
- Printing a device and plant view
- The first steps
- Working with connections
- Working with a plant
- Working with the devices
- Applications

2.6.4 Printing a device view and a plant view

Depending on whether you currently navigate with the plant view or navigate with the device view, you can print the respective tree structure:
Use the right mouse button to click on the list whose view you want to print:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

For more information, refer to the following chapters:

- Navigating with a plant view
- Navigating with a device view
- The first steps
- Working with connections
- Working with a plant
- Working with the devices
- Applications

2.7 Working with the devices

2.7.1 Working with the devices

For every plant, a plant file must be created:

- Working with a plant

After the plant has been created and the connection to the plant has been established, the information about the devices contained in the plant must be transferred to the PC:

- Update a device list

Now, the devices contained in the plant are stored in the plant file. The program knows all devices installed in the plant. There is automatic identification as to which device types are installed and which plant diagram has been selected on the device.
The program supplied also contains a device description of each device. Based on the information given in the device description, the program automatically knows:

- The data points contained in a device
- Whether a data point can be read or written
- The possible setting values for a data point and the data point's default value when the device was supplied
- How operating pages must be presented in the "Popards" application
- The diagram and data point that shall be presented in the "Plant diagram" application
- The data points for editing that can be selected in the various applications

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

3 Applications (Functions)

3.1 Working with the devices

The ACS... provides the following applications:

- Plant diagram:
  Visualization and remote operation of data points with a graphic display of the plant.
- Popcard:
  Visualization and remote operation of all transmitted data points of the connected devices.
- Online trend:
  Acquisition and presentation of the dynamic behavior of selected data points with connection to the plant.
- Offline trend:
  Acquisition and presentation of the dynamic behavior of selected data points with no connection to the plant.
- File transfer:
  Transmission and storage of the files of the central unit and of the memory cards.
- Parameter settings:
  Uploading and editing the setting parameters of a device in tabular form.
- Commissioning report:
  Logging the setting values of individual devices, device groups or the entire plant.

From the "Tools" menu – **Options...,** section **Startup application**, choose which of the above applications shall be opened right after starting the ACS...

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

3.2 Plant diagram

3.2.1 Introduction to the "Plant diagram" application

This application is not contained in all ACS7.. software packages. For more information, refer to chapter Licensing.
This application permits the graphic display of plants (individual devices or groups of devices) with the following properties:

- Data point values are automatically updated in the diagram
- Setpoints can be changed in the diagram
- With user-defined diagrams, links to other diagrams can be established

A library with standard plant diagrams is assigned to each device type. For all supported plant diagrams, that library contains:

- The graphic display
- The data points to be displayed
- The text to be displayed

The application identifies the selected plant type, automatically assigns the standard plant diagram and displays the current values.

A user-defined plant diagram can be created for each device:

- By adopting and adjusting the standard plant diagram
- By creating a new plant diagram

A user-defined plant diagram is created as follows:

- For the graphic display, take a picture from the library. That picture can be adapted with the help of external graphics software, such as Micrografx Picture Publisher™. Also, pictures produced with external graphics software can be adopted in 256-color Bitmap format
- For adding data points and links, the application has an Editor integrated

All user-defined plant diagrams are stored in a separate library. They can also be created without having a connection to the plant (offline).
Switching from standard to user-defined plant diagram, and vice versa, can take place at any time.
The plant diagrams can be printed.

For more information, refer to the following chapter:

- Processes of the "Plant diagram" application.

3.2.2 Processes in the "Plant diagram" application

This chapter describes the following processes:

- Selecting a plant diagram
- Displaying data points in a plant diagram
- Changing the value of a data point in a plant diagram
- Printing a plant diagram
- Creating a new plant diagram
- Editing a plant diagram
- Changing the properties of a plant diagram

3.2.3 Selecting a plant diagram

If you want to view the data of a plant diagram, or if you want to change values, you must select the plant diagram first.

Procedure:

Choose the "Applications" menu – **Plant diagram...**. The **Plant diagram** window is opened. On the left side of the window, you find a directory on navigating through the plant, where you can look for the required plant diagram. Using the "View" menu – **Device view / Plant view** , you can switch from Device view, to Plant view, and vice versa. Open the tree by clicking on **+**. Additional nodes or a standard diagram (red) appears and, if present, your personally created plant diagram (blue). Devices may have their standard plant diagrams. Select one of them. The respective plant diagram will appear in the right half of the window.

For more information, refer to the following chapters:

- Displaying data points in a plant diagram
- Changing the value of a data point in a plant diagram
- Printing a plant diagram
- Creating a new plant diagram
- Working with a plant

3.2.4 Displaying data points in a plant diagram

After opening a plant diagram, the values of the data points appear in parentheses. If the data point has been read or written, it appears without parentheses:

(OCI600)	Value in parentheses: The data point has been written
OCI600	Value without parentheses: The data point has been read
– – –	3 dashes: The data point can neither be read nor written because there is no communication with the device or the value is not available.

For more information, refer to the following chapters:

- Changing the value of a data point in a plant diagram
- Printing a plant diagram
- Selecting a plant diagram
- Adding a data point to the plant diagram

3.2.5 Changing the value of a data point in a plant diagram

You can change the value of a data point in a plant diagram. Note that not all data points can be changed.
Choose a data point. Press the right mouse button. The menu is opened. Choose **Properties...** Window **Data point – data point properties** appears. In that window, you can change the relevant settings. For this command, you can also double-click on the value or choose the following button:

After changing the value, the value in the diagram appears in parentheses. The parentheses are maintained until the value has actually been written to the device.

For more information, refer to the following chapters:

- Displaying data points in a plant diagram
- Printing a plant diagram
- Selecting a plant diagram
- Adding a data point to the plant diagram

3.2.6 Printing a plant diagram

Use the right mouse button to click on the plant diagram you want to print:

A. Select **Print...**. The **Print** dialog will be opened. Select the **Printer** you would like to use and the **Pages** you would like to print. Click on **Start** to start printing or select the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

For more information, refer to the following chapters:

- Displaying data points in a plant diagram
- Changing the value of a data point in a plant diagram
- Selecting a plant diagram

3.2.7 Creating a new plant diagram

In addition to using the standard plant diagrams, you can create plant diagrams that suit your specific needs. These can be created at different levels using the directory. Data points from various devices can be added to the same plant diagram.

Procedure:

A. To create a new plant diagram, choose in the left window of the "Plant diagram" application the directory (node, device) in which you want to have the new plant diagram. Move the cursor to the right window of the application and press the right mouse button. The menu is opened. Choose **New** and then **Plant diagram...**. The Plant diagram properties window is opened. In the first box, enter the name of your plant diagram. In the **Picture file** box, you can select a background picture for your plant diagram. Confirm your selection by choosing the **OK** button.

B. To copy and paste an existing plant diagram, choose in the left window the plant diagram you want to copy and change (e.g. a standard plant diagram). Press the left mouse button, hold it down and drag the diagram to the directory where you want to insert the new diagram. Then, release the left mouse button.
The program attempts to assign the data poins of the copied plant diagram for devices contained in the target directory. Depending on the situation, the program asks for additional information or indicates when data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear in the plant diagram.

C. To adopt a plant diagram from some other plant or some other PC, choose in the left window the directory into which you want to import the plant diagram. Click on it with the right mouse button and choose **Import from...**. The **Open export file** dialod appears. Choose the required export file based on the name of the original plant diagram or the file name of the export file.
The program attempts to assign the data points of the copied plant diagram for

devices contained in the target directory. Depending on the situation, the program asks for additional information or indicates when data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear in the plant diagram.
To export a plant diagram, choose in the left window the plant diagram to be exported. All user-defined plant diagrams (blue) can be exported. Use the right mouse button to click on the selected plant diagram and choose **Export to...**. The **Save As** dialog appears. Choose the place where you want to export the plant diagram.

The new plant diagram is now placed in the selected directory. In the left window, choose the newly created plant diagram to check whether the required diagram is shown.
The new plant diagram can now be further edited.

To delete a plant diagram, choose in the left window the plant diagram you want to delete. Using the right mouse button, click on the selected plant diagram and choose **Delete**.

For more information, refer to the following chapters:

- Editing a plant diagram
- Changing the properties of a plant diagram
- Selecting a plant diagram

3.2.8 Editing a plant diagram

User-defined plant diagrams (blue) can be changed at any time:
This is accomplished by changing the properties of the plant diagram or by directly editing the plant diagram.
To directly edit a plant diagram, choose the user-defined diagram and position the cursor in the right window. Now, press the right mouse button. A menu is opened. In that window, choose **Edit mode**. The plant diagram is now in edit mode. In edit mode, you can insert new data points, text or links to other plant diagrams.
Standard plant diagrams (red) cannot be changed.

The following functions are available for editing user-defined plant diagrams:

- Adding a data point to a plant diagram
- Adding text to a plant diagram
- Adding a link to a plant diagram
- Using grid lines
- Editing a plant diagram

After editing a plant diagram, the edit mode must be deactivated again. To do this, position the cursor in the right window and press the right mouse button. A menu is opened. In that window, choose **Edit mode**.

For more information, refer to the following chapters:

- Creating a new plant diagram
- Changing the properties of a plant diagram

3.2.9 Adding a data point to a plant diagram

Data points can be added to all user-defined plant diagrams (blue).
Choose the user-defined plant diagram where you wish to add a data point and change to edit mode.

Position the onscreen pointer on the plant diagram. Press the right mouse button and choose **New** – **Data point...**. Then, dialog **Plant diagram – data point properties** is opened. The dialog is subdivided into two parts. The first part, **Data point**, contains the specification of the data point and the second part, **Data point text,** the specification of the data point text.
In the **Data point** part, choose the data point you want to display and define **Font set**, **Color**, **Margin**, **Alignment**, **Background color**, or whether **Size automatic** shall be adapted, fix **Width** or **Height**, and decide whether you want **Show data point text**.
In the **Data point text** part, the default text on the data point automatically appears. You can change this **Text**, the **Font set**, the **Color**, the **Alignment** where the text of the data point value shall appear, and the **Blank [Pixel]** between the text and the data point value. You also choose whether **Size automatic** shall be adapted or a fixed **Width** or **Height** shall be used.
After entry, close the dialog by choosing the **OK** button. The data point now appears in the plant diagram.

- To move the data point to some other location, use the left mouse button and click on the data point value. Hold the left mouse button down and drag the data point. The data point will be positioned at the location where the left mouse button is released again
- To subsequently change the display format of the data point, use the right mouse button to click on the data point value and choose **Properties...**. Dialog **Plant diagram – data point properties** is opened
- To remove the data point from the plant diagram, press the right mouse button and choose **Delete**

To copy the format, choose the data point, text or link whose format you want to adopt. Press the right mouse button and choose **Copy**. Now point with the onscreen pointer to the data point where you want to transfer the format. Press the right mouse button again and choose **Paste format**.

For more information, refer to the following chapter:

- Editing a plant diagram

3.2.10 Adding text to the plant diagram

Text can be added to all user-defined plant diagrams (blue).
Choose the user-defined plant diagram where you wish to add text and change to edit mode.
Position the onscreen pointer on the plant diagram. Press the right mouse button and choose **New** – **Text...**. Then, dialog **Plant diagram – text field properties** is opened. Enter the required text and define **Font set**, **Color**, **Margin**, **Alignment**, **Background color**, whether **Size automatic** shall be adapted, fix **Width** or **Height**, decide whether you want **Word wrap**.
After entry, close the dialog by choosing the **OK** button. The text now appears in the plant diagram.

- To move the text to some other location, use the left mouse button to click on the text. The text will be positioned at the location where the left mouse button is released again
- To subsequently change the display format of the text, use the right mouse button to click on the text and choose **Properties...**. Dialog **Plant diagram – text field properties** is opened
- To remove the text from the plant diagram, press the right mouse button and choose **Delete**

To copy the format, choose the data point, text or link whose format you want to adopt. Press the right mouse button and choose **Copy**. Now point with the onscreen pointer to the data point where you want to transfer the format. Press the right mouse button again and choose **Paste format**.

For more information, refer to the following chapter:

- Editing a plant diagram

3.2.11 Adding a link to a plant diagram

Links to other plant diagrams can be added to all user-defined plant diagrams (blue). When clicking on a link, the associated plant diagram will automatically be opened. Choose the user-defined plant diagram where you wish to add the link and change to edit mode.
Position the onscreen pointer on the plant diagram. Press the right mouse button and choose **New** – **Link...**. Then, dialog **Plant diagram – link field properties** is opened. Enter the required text for the link, choose the **Address** of the plant diagram to which the change shall be made and define **Color**, **Margin**, **Alignment**, **Background color**, whether **Size automatic** shall be adapted, fix **Width** or **Height** and decide whether you automatically want **Word wrap**.
After entry, close the dialog by choosing the **OK** button. The text now appears in the plant diagram.

- To move the link to some other location, use the left mouse button to click on the link. Hold the left mouse button down and drag the link. The link will be positioned at the location where the left mouse button is released again
- To subsequently change the link, use the right mouse button to click on the link and choose **Properties...**. Dialog **Plant diagram – link field properties** is opened
- To remove the link from the plant diagram, press the right mouse button and choose **Delete**

To copy the format, choose the data point, text or link whose format you want to adopt. Press the right mouse button and choose **Copy**. Now point with the onscreen pointer to the data point where you want to transfer the format. Press the right mouse button again and choose **Paste format**.

If the plant view is subsequently changed, certain links may not work anymore since the address of the link is no longer the same, due to the changed plant view. In that case, assign the new address to the relevant link.

For more information, refer to the following chapter:

- Editing a plant diagram

3.2.12 Using grid lines

To position data points, text or links in a plant diagram more easily, grid lines can be used.
Choose the user-defined plant diagram in which you want to show grid lines and change to edit mode.
Position the onscreen pointer on the plant diagram. Press the right mouse button and choose **Grid lines**. The plant diagram now appears with grid lines.

For more information, refer to the following chapters:

- Editing a plant diagram
- Adding a data point to a plant diagram
- Adding text to a plant diagram
- Adding a link to a plant diagram

3.2.13 Editing a picture

The displayed background picture can be changed in all user-defined plant diagrams (blue).
Choose the user-defined plant diagram the background picture of which you want to edit and change to edit mode.
Position the onscreen pointer on the plant diagram. Press the right mouse button and choose **Edit picture...**. Then, the Editor will be started which, as a standard Editor for editing Bitmap pictures in your Windows environment, has the extension .BMP. Normally, this is the Windows program called **Paint**. Here, you can change the plant diagram arbitrarily and add new drawings, symbols, text, etc.
Save the picture before leaving Editor. The changed background picture will appear in the plant diagram.

For more information, refer to the following chapter:

- Editing a plant diagram

3.2.14 Changing the properties of a plant diagram

The properties of user-defined plant diagrams (blue) can be changed at any time.
You can:

- Change the name of the plant diagram
- Define some other Bitmap file as a background picture
- Adopt data points and / or the background picture from some other plant diagram

In the left window, choose the plant diagram whose properties you want to change. Press the right mouse button to click on the plant diagram in the left window and choose **Properties...**. The **Plant diagram properties** window appears:

- In the first entry box, you can change the name of the plant diagram
- **Picture file**: Click on the folder if you wish to display some other background picture. The dialog for **opening** Bitmap files appears. When clicking on a file, the preview shows the relevant picture. Select the required background picture. Any Bitmap files with a resolution of 256 colors can be included in the plant diagram. When assigning a new background picture, all data points, text and links that previously appeared in the plant diagram will be maintained
- **Definition file**: Click on the folder if you want to adopt the displayed data points, text and links with or without background picture from some other plant diagram. The dialog for **opening** definition files appears. When clicking on a file, the preview shows the relevant picture. Select the required picture. Also choose whether you want **Use picture of data point file**. If yes, the background picture will be taken from the selected definition file to be included in the current plant diagram. When assigning a new definition file, the plant diagram will lose all previsouly displayed data points, text and links and, depending on the selection made, the previous background picture also.

After closing the dialog, the changes will be activated. If some other definition file has been assigned, the program attempts to assign the data points of devices existing in the directory of the plant diagram. Depending on the situation, the program asks for

more information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear in the plant diagram.

For more information, refer to the following chapters:

- Creating a new plant diagram
- Editing a plant diagram

3.3 Popcard

3.3.1 Introduction to the "Popcard" application

This application provides for the visualization of all data points transmitted by each device, and of their values.

- Each device type has a standard Popcard; structure and contents of the operating pages are predefined

User-defined Popcards can be created for each device and each node. Data points from all subordinate devices can be added to a Popcard that is assigned to a node. Standard and user-defined Popcards can be copied to devices of the same type or to higher level nodes.
A user-defined Popcard has the following properties:

- It can consist of several user-defined pages
- Each page can be subdivided into several user-defined sections
- The Popcard, the pages and sections can be assigned freely selectable data points and separators

It is always possible to switch from the standard to the user-defined Popcard, and vice versa.
Every selected page is automatically updated. Updating is visualized.
The operating opages can be printed and exported as an ASCII file.

For more information, refer to the following chapter:

- Processes in the "Popcard" application.

3.3.2 Processes in the "Popcard" application

The following processes are described in this chapter:

- Selecting a device from Popcard
- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Checking the status of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Creating a new Popcard
- Editing Popcard

3.3.3 Selecting a device from Popcard

If you want to view device data in Popcard format, or if you want to change values, you need to choose Popcard first.

Procedure:
Choose the "Applications" menu – **Popcard...**. The **Popcard** window is opened. On the left side of the window, you find the directory on navigating through the plant in which you find the required Popcard. Using the "View" menu – **Device view / Plant view**, you can change between Device view and Plant view. Open the tree by clicking on **+** . Additional nodes or a standard Popcard (red) appears and, if present, the personally created **Popcard** (blue). Standard Popcards only exist for devices. Open one of the Popcards by clicking on **+**. The individual pages and sections of the Popcard appear. These pages contain the data points. When making the selection, these data points appear in the right half of the window.

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Checking the status of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Creating a new Popcard
- Working with the plant

3.3.4 Displaying data points in Popcard

After opening a Popcard, page or section, the data points appear on the right side of the window.
The data points displayed depend on the standard Popcard pertaining to the relevant device, or on the definition of the self-created Popcard. The same data point can occur on several Popcards, pages or in several sections. The same data point is shown in several columns. The columns have the following meaning:

Column	Description
No.	Consecutive numbering of the data points on a page
Line no.	Referring to the installation instructions of the relevant device
Address	Address of the device to which the data point belongs
Data point	Name of the data point
Value	Value of the data point
Unit	Unit of the data point

Sorting can take place by column.

After opening a Popcard, page or section, the values of the data points appear in red. If the data point has been read or written, it will appear in black:

	Red: The data point not yet read
	Black: The data point has been read
	Blue: The data point has been changed, but has not yet been written to the device

Whether the data point is a data point that can be written, read only, or is a reference data point, can be identified as follows:

	Data point: The value can be changed
	Data point: The value cannot be changed
	Reference data point: The value can be changed
	Reference data point: The value cannot be changed

For more information, refer to the following chapters:

- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Checking the status of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Selecting a device from Popcard

3.3.5 Displaying reference data points in Popcard

Pages of Popcard or other data points are shown or hidden, depending on reference data points. Reference data points can be identified by a link symbol at the bottom of the circle.

	Reference data point: The value can be changed
	Reference data point: The value cannot be changed

If, on the "View" menu – **Consider dependencies** has not been selected, all pages and all data points will be displayed, independent of the value of the reference data points.
For the display and the changing of values of reference data points, the same rules apply as for normal data points.

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Changing the value of a data point in Popcard
- Checking the status of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Selecting a device from Popcard

3.3.6 Changing the value of a data point in Popcard

You can change the value of a data point in Popcard. Note that certain data points cannot be changed.

Data point: The value can be changed
Data point: The value cannot be changed
Reference data point: The value can be changed
Reference data point: The value cannot be changed

You can change the value of a data point only if you have the required write access, which depends on your user access. The user level can be changed via the "Tools" menu **– Log on...**. Depending on the password the program decides which user level you are authorized to work on. The user levels correspond to those of the respective devices: If, in the program, you work on the enduser level, for instance, you can change the same values as if you were on the enduser level of the respective device.

A. Choose a data point. Press the right mouse button. A menu is opened. From that menu, choose **Properties...** The **Data point command** window of that data point appears. You can make the required settings there. For that command, you can also double-click on the value or use the following button:

B. To copy the value of a data point to some other data point, use the right mouse button to click on the data point from which you want to copy the value. Choose **Copy**. Then, use the right mouse button to click on the data point you want to assign the copied value to. Choose **Paste format**.
Values can be copied and pasted only if both data points are of the same type

(e.g. both analog values or both switching times). It is also possible to copy the values of two successive data points (multiple selection possible). The values will then be transferred to the data points that follow the data point on which **Paste value** was carried out. This function is very useful in connection with time switch programs, for example.

After changing the value, the value appears in blue. The blue color is maintained until the value is actually written to the device, whereupon it appears in black again:

	Blue: Data point has been changed, but the value has not yet been written to the device
	Black: Data point has been read back

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Checking the status of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Selecting a device from Popcard
- Entering the password

3.3.7 Checking the status of a data point in Popcard

You can check the status of a data point.

To do this, choose a data point. Press the right mouse button. A menu is opened. In that window, choose **Status...** The **Data point – Status** window of that data point appears:

- Override
- Out of service
- Event enable
- Device error
- Periphery error
- Disturbed
- Unacknowledged

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Printing in Popcard
- External editing of Popcard
- Selecting a device from Popcard

3.3.8 Printing in Popcard

When selecting a Popcard, page or section, data points appear in the right half of the window. That half of the window can be printed out:
Use the right mouse button to click on the Popcard, page or section you want to print:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Checking the status of a data point in Popcard
- External editing of Popcard
- Selecting a device from Popcard

3.3.9 External editing of Popcard

The entire contents of Popcard can be exported, enabling the data to be further handled with an external program, such as Microsoft Excel.
This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Popcard** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened.
Use the right mouse button to click on the required Popcard and choose **Edit externally...**. The **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened in the respective program. Formats from the template will be adopted and the defined macro started.

For more information, refer to the following chapters:

- Displaying data points in Popcard
- Displaying reference data points in Popcard
- Changing the value of a data point in Popcard
- Printing in Popcard
- Selecting a device from Popcard

3.3.10 Creating a new Popcard

In addition to the existing standard Popcard, you can create your own user-defined Popcards:

- Standard Popcard: Popcard that constitutes part of the program and whose contents is predefined, enabling you to make immediate settings and to check values, with no engineering effort
- User-defined Popcard: Popcard created by yourself that enables you to quickly access data points that are frequently used

The user-defined Popcard can be created on different levels in the directory. Data points of different devices can be added to the same Popcard.

Procedure:

A. To create a new Popcard, choose in the left window of the "Popcard" application the directory (nodes, device) where you want to have the Popcard. Position the onscreen pointer in the right window of the application and press the right mouse button. Then, a menu is opened. Choose **New** and then **Popcard...**. The **Popcard properties** window is opened. In that window, enter the name of the Popcard. Confirm the entry by choosing the **OK** button.

B. To copy and paste an existing Popcard, choose in the left window the Popcard you want to copy and change (e.g. standard Popcard). Press the left mouse button, hold it down and drag the Popcard to the directory where you want to add the new Popcard. Then, release the left mouse button again.
The program attempts to assign data points fo the copied Popcard for devices contained in the target directory. The program may ask for additional information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear on the Popcard.

C. To adopt a Popcard from some other plant or PC, choose in the left window the directory into which you want to import the Popcard. Use the right mouse button to click on the selected directory and choose **Import from...**. The **Open export file** dialog appears. Choose the required export file based on the name of the original Popcard or the name of the export file.
The program attempts to assign data points fo the copied Popcard for devices contained in the target directory. The program may ask for additional information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear on the Popcard.
To export a Popcard, choose in the left window the Popcard to be exported. All user-defined Popcards (blue) can be exported. Use the right mouse button to click on the selected Popcard and choose **Export to...**. The **Save As** dialog appears. Choose the location where you want to export the Popcard.

The new Popcard is now filed in the selected directory. In the left window, choose the newly created Popcard in order to check if the required information appears.
The new Popcard can now be further edited.

To delete a Popcard, choose in the left window the Popcard you want to delete. Use the right mouse button to click on the relevant Popcard and choose **Delete**.

For more information, refer to the following chapters:

- Editing Popcard
- Selecting a device from Popcard

3.3.11 Editing Popcard

User-defined Popcards (blue) can be changed at any time:
To edit a Popcard, choose the user-defined Popcard and position the onscreen pointer in the right window. Press the right mouse button. A menu is opened. From that menu, choose **New**. Now, you can add a new **Page / Group...**, **separator...** or **Data point...** to the Popcard.
Standard Popcards (red) cannot be changed.
The following functions are available for editing user-defined Popcards:

- Adding a new page / group to Popcard
- Adding a new section to Popcard pages
- Adding a new data point to Popcard, a page or section
- Adding a new separator to Popcard, a page or section
- Sorting data points, sections and pages

To delete a Popcard, choose the relevant Popcard with the left mouse button. Use the right mouse button to click on the Popcard and choose **Delete**.

For more information, refer to the following chapter:

- Creating a new Popcard

3.3.12 Adding a new page / group to Popcard

Pages can be added to all user-defined Popcards (blue).

A. Select the user-defined Popcard where you want to add a page. Position the onscreen pointer in the right window. Press the right mouse button and choose **New** – **Page / Group...**. Then, the **Page properties** dialog is opened. Enter the name of the new page.
   After entry, close the dialog by choosing the **OK** button. The page now appears on the Popcard.

B. To copy and paste an existing page, choose in the left window the page you want to copy and change (e.g. a page of the standard Popcard). Press the left mouse button, hold it down and drag the page to the Popcard where you want to add the new page. Then, release the left mouse button.
   The program attempts to assign the data points of the copied page for devices contained in the target directory. The program may ask for additional information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned will not appear on the page.

The following functions are available for editing Popcard pages:

- Adding a new section to Popcard pages
- Adding a new data point to Popcard, a page or section
- Adding a new separator to Popcard, a page or section
- Sorting data points, sections and pages

To rename pages, click on the page with the right mouse button and choose **Properties...**. The **Popcard properties…** dialog appears where you can change the name.

To delete a page, choose the relevant page with the left mouse button. Use the right mouse button to click on the page and choose **Delete**.

For more information, refer to the following chapter:

- Editing a Popcard

3.3.13 Adding a new section to Popcard pages

On all user-defined Popcards (blue), pages can be subdivided into sections:

A. Choose the page where you want to add a section. Position the onscreen pointer in the right window. Press the right mouse button and choose **New** – **Section...**. Then, the **Section properties** dialog is opened. Enter the name of the new section.
After entry, close the dialog by choosing the **OK** button. The new section now appears on the Popcard page.

B. To copy and paste an existing section, choose in the left window the section you want to copy and change (e.g. a section of a standard Popcard page). Press the left mouse button, hold it down and drag the page to the Popcard page where you want to add the new section. Then, release the left mouse button.
The program attempts to assign the data points of the copied section for the devices contained in the target directory. The program may ask for additional information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned to a device will not appear in the section.

The following functions are available for editing Popcard pages:

- Adding a new data point to Popcard, a page or section
- Adding a new separator to Popcard, a page or section
- Sorting data points, sections and pages

To rename sections, click on the section with the right mouse button and choose **Properties...**. The **Section properties…** dialog appears where you can change the name.
To delete a section, choose the relevant section with the left mouse button. Use the right mouse button to click on the section and choose **Delete**.

For more information, refer to the following chapters:

- Adding a new page / group to Popcard
- Editing a Popcard

3.3.14 Adding a new data point to Popcard, a page or section

Data points can be added to all user-defined Popcards (blue) or their pages or sections.

A. Choose the Popcard / page / section where you want to add data points. Position the onscreen pointer in the right window. Press the right mouse button and choose **New** – **Data point...**. The **Data point selection** dialog is opened. Navigate through the plant in the left half of the dialog to find the required data points. In the right half of the dialog, choose the data points you want to add (multiple selection possible). Choose the **Add** button each time you want to add a data point and all selected data points will be added to the Popcard / page / section.
After all required data points have been added, close the dialog by choosing the **Close** button.

B. To copy and paste data points, choose in the right window the data points you want to copy (multiple selection possible). Press the left mouse button, hold it down and

drag the data points to the Popcard / page / section where you want to add the data points. Then, release the left mouse button.
The program attempts to assign the data points for the devices contained in the target directory. The program may ask for additional information or notifies if data points cannot be assigned to any of the devices. Data points that cannot be assigned will not be displayed.

The following functions are available for editing Popcards, pages and sections:
- Adding a new separator to Popcard, a page or section
- Sorting data points, sections and pages

To delete a data point, select the relevant data points (multiple selection possible). Use the right mouse button to click on the data point and choose **Delete**.

For more information, refer to the following chapters:
- Adding a new section to Popcard pages
- Adding a new page / group to Popcard
- Editing a Popcard

3.3.15 Adding a new separator to Popcard, a page or section

Separators can be added to all user-defined Popcards (blue), their pages or sections. They are used for visually separating data points to make the structure easier to understand.

A. Choose the Popcard / page / section where you want to add a separator. Position the onscreen pointer in the right window. Press the right mouse button and choose **New** – **Separator...**. Then, the **Separator properties…** dialog is opened. Enter the name of the separator.
After entry, close the dialog by choosing the **OK** button. The separator is now be added to the Popcard / page / section.

B. To copy and paste a separator, choose in the right window the separator you want to copy. Press the left mouse button, hold it down and drag the separator to the Popcard / page / section where you want to add the separator. Then, release the left mouse button.

The following additional functions are available for editing Popcards, pages and sections:
- Adding a new data point to Popcard, a page or section
- Sorting data points, sections and pages

To rename separators, click on the separator with the right mouse button and choose **Properties...**. The **Separator properties** dialog appears where you can change the name.
To delete a separator, select the relevant separator (multiple selection possible). Use the right mouse button to click on the separator and choose **Delete**.

For more information, refer to the following chapters:
- Adding a new section to Popcard pages
- Adding a new page / group to Popcard
- Editing a Popcard

3.3.16 Sorting data points, sections and pages

Position the onscreen pointer on the Popcard, page or section and press the right mouse button. A menu is opened:

A. Choose **Sort manually**. You can:

a. Sort the pages, sections or data points of Popcards
b. Sort the sections or data points of operating pages
c. Sort data points in sections

The **Sort dialog** window is opened. In that window, you are given the choice to sort manually. You can move pages, sections or data points using the two arrows (top right hand corner in the window). Separators can be sorted like data points and appear in the dialog for sorting data points.

B. When choosing **Sort**, the respective nodes will be sorted alphabetically:
a. In Popcards, the pages
b. On pages, the sections

The following additional functions are available for editing Popcards, pages and sections:

- Adding a new data point to Popcard, a page or section
- Adding a new separator to Popcards, a page or section

For more information, refer to the following chapters:

- Adding a new section to Popcard pages
- Adding a new page / group to Popcard
- Editing a Popcard

3.4 Online trend

3.4.1 Introduction to the "Online trend" application

This application is not contained in all ACS7… software packages. For more information, refer to chapter Licensing.
This application enables any data points of the plant to be logged.
The trend definition defines the description, the selected data points of all devices contained in the plant and the sampling interval. It is also possible to select storage of the commissioning report at the beginning and end of logging.
The cyclically queried data are stored and graphically presented in the trend loggings. Previous trend loggings can be retrieved at any time for some other graphical representation.
With online trend, there is a connection between plant and PC. All acquired data will directly be stored in the PC. The graph of trend logging is made online.
Trend logging can be printed out and exported as an ASCII file.

For more information, refer to the following chapter:

- Processes in the "Online trend" application.

3.4.2 Processes in the "Online trend" application

The following processes are described in this chapter:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Starting online trend logging
- Evaluating online trend logging
- Printing in online trend
- External editing of online trend logging

3.4.3 Creating / changing an online trend definition

A trend definition defines the data points that shall be logged. For one trend definition, several logging processes can be started. During logging, the data points selected in the trend definition are logged and stored. The stored data can also be accessed after logging has been stopped. At a later time, logging of the same trend definition and with the same data points can again be started.

Procedure:

A. To create a new trend definition, choose in the left window of the "Online trend" application the uppermost directory (plant name). Position the onscreen pointer in the right window of the application and press the right mouse button. A menu is opened. Choose **New** – **Online trend definition...**. The **Trend properties** window is opened. The window is subdivided into several sections:

General: Enter the name of the trend definition. Additional information fields for optional data are available. You can state the **Location** of the plant, the **Installer** who has created the trend definition, or give an additional **Description** of the trend definition.

Commissioning report: As an option, you can automatically get a commissionign report before starting logging (**Comissioning report at start**) or after the end of logging (**Comissioning report at stop**). Select the required choices and the **Commissioning definition** which defines the devices the commissioning data of which you want to read (for more information, refer to the "Commissioning report" application).

Interval: Define the interval in seconds at which the data points to be logged shall be stored – **Interval [s]**.

Info: When creating the trend definition, you have not yet selected the data points to be logged. For this reason, the relevant information is not yet available at this point in time. After choosing the data points, you can check here how long the **Remaining logging time [h]** will be until the PC‘s storage space capacity is exhausted. The information displayed will be updated by choosing **Refresh**. If you want to log for a longer period of time, you can either extend the interval or log a smaller number of data points.

Now, confirm your entry by choosing the **OK** button.

B. To copy and paste an existing trend definition, choose in the left window the trend definition you want to copy and change. Press the left mouse button, hold it down and drag the trend definition to the uppermost directory (plant name). Then, release the left mouse button.

To change the trend definition, choose in the left window the trend definition you want to change. Use the right mouse button to click on the selected trend definition and choose **Properties...**. The **Trend properties** window is opened. The trend definition can now be revised.

Now, you can start with the selection of data points for online trend logging.

To delete a trend definition, choose in the left window the relevant trend definition. Use the right mouse button to click on the selected trend definition and choose **Delete**. Caution: Any logging associated with the trend definition will also be deleted.

For more information, refer to the following chapters:

- Selecting data points for online trend logging
- Starting online trend logging
- Evaluating online trend logging
- Printing in online trend
- "Commissioning report" application

- External editing of online trend logging

3.4.4 Selecting data points for online trend logging

In the left half of the window, choose the trend function for which you want to select data points for trend logging. Position the onscreen pointer in the right half of the window and choose **New** – **Data point...**. Then, the **Data point selection** window is opened. Here, you can choose the data points you want to log. To choose several data points at the same time:

- Use the left mouse button to click on the first of several successive data points. Press the Shift key and hold it down. Now, use the left mouse button to click on the last data point you want to choose. The required data points are thus defined
- Keep the Ctrl key depressed and choose all required data points with the help of the left mouse button. Each of the data points clicked will be highlighted

Choose **Add** to add the highlighted data points to the trend definition. After selection, choose **Close** to return to the **Online trend** window. In the right half of the **Online trend** window, you now find all added data points.
The same data point may exist in several trend definitions. The same data point is shown in several columns. The columns have the following meaning:

Column	Description
Channel	Channel for logging the data point
Line no.	Referring to the installation instructions of the respective device
Name	Name of the data point
Device	Device to which the data point belongs
Address	Address of the device to which the data point belongs
Offset	Offset with which the data point is shown in the graph
Number	When on, the value will be exported as a digit
Text	When on, the value will be exported as text (e.g. in the case of enumerations)

Sorting can be made by column.

For each data point you can define whether an offset for the presentation shall be added (particularly useful when logging digital values 0/1, since they would often be on top of one another, preventing them from being simultaneously visible) and how the value shall be exported:
Use the right mouse button to click on the data point and choose **Properties...**. You can now change the **Offset** and the export properties.

To remove a data point from the trend definition, choose in the right half of the **Online trend** window the relevant data point (multiple selections as described above are possible). Use the right mouse button to click on the selected data point and choose **Delete**.

For more information, refer to the following chapters:

- Creating / changing an online trend definition
- Starting online trend logging
- Evaluating online trend logging
- Printing in online trend
- External editing of online trend logging

3.4.5 Starting online trend logging

When creating the online trend definition, the data points to be logged were defined. Choose in the left half of the window the trend definition for which you want to start logging. The right half of the window shows the selected data points. Note: Only one logging process per trend definition can be started.
Position the onscreen pointer in the right half of the window. Press the right mouse button and choose **New** – **Trend logging...**. Now, the **Trend logging properties** window is opened. The window is subdivided into several sections:

General: Enter the name of trend logging (e.g. YYMMDD – 20011117 Test). The information fields **Start of logging** and **End of logging** also appear. After completing logging, these two fields show you the time when logging was started and stopped.

Commissioning report: These settings will automatically be adopted by the trend definition. If you wish, you can change the settings for this logging process.

Interval: These settings will automatically be adopted by the trend definition. If you wish, you can change the settings for this logging process.

Graphics: Here, scale the graph for the logging process.
You can define the total length of the **Time axis [min]**, or whether the length shall **Automatically** be determined by the program. When choosing **Automatically**, the program will show the entire trend logging process.
You can also define which shall be highest displayed value (**Y-Max**) and the smallest displayed value (**Y-Min**), or whether these values shall **Automatically** be determined by the program. When choosing **Automatically**, the scale is adjusted such that all values will lie within the displayed time axis. During logging and scrolling, the scale is continuously adjusted.

Info: Check here how long the **Remaining logging time [h]** will be until the PC's storage space capacity is exhausted. The information displayed will be updated by choosing **Refresh**. If you want to log for a longer period of time, you can either extend the interval or log a smaller number of data points.

Confirm the entries by choosing the **OK** button. Underneath the trend definition, another directory with the new logging is shown now (*yellow*, to identify the current logging process). This logging process will be selected automatically and the right half of the **Online trend** window is now split in two:

- The upper half shows you the selected data points, as before
- The lower half shows the logging process as a graph

During the logging process, you can start to evaluate the last values of the current online trend logging, or you can do it when logging is completed.

To stop logging, use the right mouse button to click on the logging and choose **Stop trend logging**. Trend logging is now highlighted in white, which means that logging is terminated.
When logging is completed, you can access the data at any time and evaluate the logging pcoess.

For more information, refer to the following chapters:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Evaluating online trend logging

- Printing in online trend
- External editing of online trend logging

3.4.6 Evaluating online trend logging

To make an evaluation, choose the logging in the left half of the window. The right half of the window of the online trend is now divided in two:

- The upper half shows you all the data points selected for logging
- The lower half shows the logging process as a graph

To **identify a data point in the graph** or to **display a value at a certaint time,** position the top of the onscreen pointer on the point of intersection of the value and the vertical time mark: A window with date, time of day, description of the data point and value of the data point appears. This function is not enabled when logging is in progress.

To **show data points in the graph or to hide them,** click on the little box in the **Channel** column of the relevant data point. When the little box contains a tick, the relevant data point is added to the graph.

To **show a data point in the graph with an offset,** use the right mouse button to click on the data point and choose **Properties...**. In the **Trend data point properties** window, you can now determine the **Offset**.

To change the **scaling of the graph,** use the right mouse button to click on the logging and choose **Properties...**. You can also choose logging with the left mouse button and use the following button:

The **Trend logging properties** window is subdivided into several sections:

General: You can change the name of trend logging at a later time. The information fields **Start of logging** and **End of logging** appear. These two fields show you the time when logging was started and stopped.

Commissioning report: These settings show you if a commissioning report was generated when logging was started and / or stopped. After logging, the setting cannot be changed anymore.

Interval: When logging is completed, this setting shows you the interval for data point readout. After logging, the setting cannot be changed anymore.

Graphics: Here, scale the graph for the logging process.
You can define the total length of the **Time axis [min]**, or whether the length shall **Automatically** be determined by the program. When choosing **Automatically**, the program will show the entire trend logging process.
You can also define which shall be highest displayed value (**Y-Max**) and the smallest displayed value (**Y-Min**), or whether these values shall **Automatically** be determined by the program. When choosing **Automatically**, the scale is adjusted such that all values will lie within the displayed time axis. During logging and scrolling, the scale is continuously adjusted.

Info: Here, you can see the size of the logging file.

To **scroll on the time axis,** a scroll bar appears below the graph. This scroll bar enables you to scroll forward and backward.

For more information, refer to the following chapters:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Starting online trend logging
- Printing in online trend
- External editing of online trend logging

3.4.7 Printing in online trend

When choosing a trend definition, the selected data points appear in the right half of the window:
Use the right mouse button to click on the trend definition you want to print:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

The data points can be printed out in graphic form with the help of an external program, such as Microsoft Excel. For more information, refer to chapter External editing of online trend logging.

For more information, refer to the following chapters:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Starting online trend logging
- Evaluating online trend logging
- Printing in online trend
- External editing of online trend logging

3.4.8 External editing of online trend logging

The values of the data points stored in trend logging can be exported to be further edited with an external program, such as. Microsoft Excel.
This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Online trend** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened. The enclosed TREND.XLS template contains Macro1, for example, which automatically contains an Excel graph with the logged values, enabling you to print them out in Excel format.
Use the right mouse button to click on the logging and choose **Edit externally...**. Then, the **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened by the respective program. Formatings of the template will be adopted and the defined macro started.

For more information, refer to the following chapters:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Starting online trend logging
- Evaluating online trend logging
- Printing in online trend

3.5 Offline trend

3.5.1 Introduction to the "Offline trend" application

This application is not contained in all ACS7… software packages. For more information, refer to chapter Licensing.
This application enables any data points of the plant to be logged.
The trend definition defines the description, the selected data points of all devices contained in the plant and the sampling interval. It is also possible to define the beginning and end of logging.
With offline trend, there is no connection between plant and PC. All acquired data will be downloaded to the memory card in the central unit. For this reason, the "Offline trend" application is only provided in the case of plants using a central unit that supports this function (central unit type OCI600).
The graphic display of trend logging takes place after reading the logging from the central unit. Previous trend logging can be graphically presented again at any time.
Trend logging can be printed out and exported as an ASCII file.

For more information, refer to the following chapter:

- Processes in the "Offline trend" application.

3.5.2 Processes in the "Offline trend" application

The following processes are described in this chapter:

- Creating / changing an online trend definition
- Selecting data points for online trend logging
- Starting online trend logging

- Evaluating online trend logging
- Printing in online trend
- External editing of online trend logging

3.5.3 Creating / changing an offline trend definition

A trend definition defines the data points that shall be logged. For one trend definition, several logging processes can be started: During logging, the data points selected in the trend definition will be logged and stored in the central unit. The data stored in the central unit can be transferred to the PC for evaluation. At a later time, logging of the same trend definition and with the same data points can again be started.

Procedure:

A. To create a new trend definition, choose in the left window of the "Offline trend" application the uppermost directory (plant name). Position the onscreen pointer in the right window of the application and press the right mouse button. A menu is opened. Choose **New** – **Offline trend definition...**. The **Offline trend properties** window is opened. The window is subdivided into several sections:

General: Enter the name of the trend definition. Additional information fields for optional data are available. You can state the **Location** of the plant, the **Installer** who has created the trend definition, or give an additional **Description** of the trend definition.

Status provides information about the following possible statuses:

- Pending (light-blue): The trend definition has been transferred to the central unit. The time of execution has not yet been reached however. Logging will later be started automatically
- Active (*yellow*): In the central unit, logging of this trend definition is currently in progress
- Executed (green): Logging of this trend definition has been completed in the central unit
- Not available (white): This trend definition is not currently stored in the central unit. In this central unit, there is no logging for this trend definition in progress

In addition, the status is identified by a color-coded trend definition.

Interval: Define the interval in seconds at which the data points to be logged shall be stored – **Interval [s]**.

You can choose whether logging shall be started directly after downloading the trend definition to the central unit (**Start directly after loading**). Alternatively, you can choose **Start Date/Time** and **Stop Date/Time** of logging. In that case, logging will automatically be started and stopped at a defined point in time.

Now, confirm your entry by choosing the **OK** button.

B. To copy and paste an existing trend definition, choose in the left window the trend definition you want to copy and change. Press the left mouse button, hold it down and drag the trend definition to the uppermost directory (plant name). Then, release the left mouse button.

C. If, at an earlier point in time, a trend definition has already been downloaded to the central unit, and that trend definition is now only available in the central unit, it can be read back to the PC. In that case, use the right mouse button to click on the uppermost directory (plant name) and choose **Upload trend definition**. Note: This function is available only when there is a connection to the plant.

To change the trend definition, choose in the left window the trend definition you want to change. Use the right mouse button to click on the selected trend definition and choose **Properties...**. The **Offline trend properties** window is opened, which enables

you to access the settings described in A. The properties of pending or active trend definitions cannot be changed.

Now, you can start with the selection of data points for offline trend logging.

To delete a trend definition, choose in the left window the relevant trend definition. Use the right mouse button to click on the selected trend definition and choose **Delete**. Caution: Any logging associated with the trend definition will also be deleted.

For more information, refer to the following chapters:

- Selecting data points for offline trend logging
- Starting offline trend logging
- Evaluating offline trend logging
- Printing in offline trend
- External editing of offline trend logging

3.5.4 Selecting data points for offline trend logging

In the left half of the window, choose the trend function for which you want to select data points for trend logging. Position the onscreen pointer in the right half of the window and choose **New** – **Data point...**. Then, the **Daten point selection** window is opened. Here, you can choose the data points you want to log. To choose several data points at the same time:

- Use the left mouse button to click on the first of several successive data points. Press the Shift key and hold it down. Now, use the left mouse button to click on the last data point you want to choose. The required data points are thus defined
- Keep the Ctrl key depressed and choose all required data points with the help of the left mouse button. Each of the data points clicked will be highlighted

Choose **Add** to add the highlighted data points to the trend definition. After selection, choose **Close** to return to the **Offline trend** window. In the right half of the **Offline trend** window, you now find all added data points.
The same data point may exist in several trend definitions. The same data point is shown in several columns. The columns have the following meaning:

Column	Description
Channel	Channel for logging the data point
Line no.	Referring to the installation instructions of the respective device
Name	Name of the data point
Device	Device to which the data point belongs
Address	Address of the device to which the data point belongs
Offset	Offset with which the data point is shown in the graph
Number	When on, the value will be exported as a digit
Text	When on, the value will be exported as text (e.g. in the case of enumerations)

Sorting can be made by column.

For each data point, you can define whether an offset for the presentation shall be added (particularly useful when logging digital values 0/1, since they would often be on top of one another, preventing them from being simultaneously visible) and how the value shall be exported:
Use the right mouse button to click on the data point and choose **Properties...**. You can now change the **Offset** and the export properties.

To remove a data point from the trend definition, choose in the right half of the **Offline trend** window the relevant data point (multiple selections as described above are

possible). Use the right mouse button to click on the selected data point and choose **Delete**.

For more information, refer to the following chapters:

- Creating / changing an offline trend definition
- Starting offline trend logging
- Evaluating offline trend logging
- Printing in offline trend
- External editing of offline trend logging

3.5.5 Starting offline trend logging

When creating the offline trend definition, the data points to be logged were defined. Choose in the left half of the window the trend definition for which you want to start logging. The right half of the window shows the selected data points.
You may have to check the settings of the trend definition again: Press the right mouse button and click on the selected trend definition, then choose **Properties...**. The **Offline trend properties** windows is opened in which you can access the settings described in Creating / changing an offline trend definition.

To start logging, use the right mouse button to click on the trend definition and choose **Download trend definition**. The trend definition with the information about the data points to be logged and the start and end of logging are now transferred to the memory card inserted in the central unit:

- Note: The central unit must have a memory card inserted. The logged data will be transferred to the memory card. The inserted memory card must be formated
- Note: For each trend definition and central unit, only one logging process can be started

After the trend definition has been transferred to the central unit, the status of the trend definition will change from *not available* (trend definition highlighted in white) to *pending* (trend definition highlighted in light-blue).
The central unit starts logging automatically, depending on the trend definition settings:

- Directly after receiving the trend definition (**Start directly after loading**)
- After the start time (**Start Date/Time**) of logging has been reached

As soon as the central unit has started logging, the status of the trend definition changes to *active* (trend definition highlighted in yellow).

After the trend definition has been transferred to the central unit, the connection to the plant can be cut. After cutting the communication, the status of the offline trend is no longer available on the central unit. Hence, all trend definitions will be highlighted in white:

- The central unit starts and stops logging automatically, depending on the setting of the loaded trend definition
- The central unit performs logging and storage of the values automatically, depending on the selected data points in the loaded trend definition

When a connection to the central unit is reestablished, the status of the offline trend in the central unit will also be available again and the trend definition that is active in the central unit will be appropriately highlighted:

- Pending (light-blue): The trend definition has been transferred to the central unit. The time of execution has not yet been reached however. Logging will automatically be started later
- Active (yellow): For this trend definition, logging in the central unit is currently in progress

- Executed (green): For this trend definition, logging in the central unit has been completed
- Not available (white): This trend definition is not currently stored in the central unit. In this central unit, there is no logging for this trend definition in progress

During logging, you can already start with the evaluation of the values of the current offline trend logging logged thus far, or you can do this after logging is completed.

To manually stop active logging (yellow), use the right mouse button to click on the trend definition and choose **Stop trend logging**. Trend logging is now highlighted in green, which means that logging has been completed.

For more information, refer to the following chapters:

- Creating / changing an offline trend definition
- Selecting data points for offline trend logging
- Evaluating offline trend logging
- Printing in offline trend
- External editing of offline trend logging
- Formating memory cards

3.5.6 Evaluating offline trend logging

To evaluate the data logged and stored in the central unit, they must first be transferred to the PC. Logged data can be uploaded to the PC either from an active trend definition (yellow) or from an executed trend definition (green):
In the left half of the window, choose the trend definition for which you want to transfer to the PC the data logged in the central unit. The selected data points will appear in the right half of the window. Position the onscreen pointer in the right half of the window. Press the right mouse button and choose **New** – **Trend logging...**. The program now uploads the information about logging from the central unit. The process is shown in the **Upload trend logging** window. Then, the **Trend logging properties** dialog is opened. The window is subdivided into several sections:

General: Enter the name of trend logging (e.g. YYMMDD – 20011117 Test). In addition, the information fields **Start of logging** and **End of logging** appear. In these two fields, you can see when logging was started and when active logging (yellow) was uploaded or when executed logging (green) was stopped. The **Status** of logging can also be seen:

- Pending (light-blue): The trend definition has been transferred to the central unit. The time of execution has not yet been reached however. Logging will automatically be started later
- Active (yellow): For this trend definition, logging in the central unit is currently in progress
- Executed (green): For this trend definition, logging in the central unit has been completed
- Not available (white): This trend definition is not currently stored in the central unit. In this central unit, there is no logging for this trend definition in progress

In addition, the status is identified by an appropriate color code of the trend definition.

Graphics Here, scale the graph for the logging process.
You can define the total length of the **Time axis [min]**, or whether the length shall **Automatically** be determined by the program. When choosing **Automatically**, the program will show the entire trend logging process.
You can also define which shall be highest displayed value (**Y-Max**) and the smallest displayed value (**Y-Min**), or whether these values shall

Automatically be determined by the program. When choosing **Automatically**, the scale is adjusted such that all values will lie within the displayed time axis. When scrolling through the logging, the scale is continuously adjusted.

Close the dialog by choosing the **Close** button.

For evaluation, choose logging in the left half of the window. The right half of the window of the offline trend is now split in two:

- In the upper half of the window, you see all data points selected for logging
- In the lower half of the window, the logging process is shown in the form of a graph

To **identify a data point in the graph** or to **display a value at a certaint time,** position the top of the onscreen pointer on the point of intersection of the value and the vertical time mark: A window with date, time of day, description of the data point and value of the data point appears. This function is not enabled when logging is in progress.

To **show data points in the graph or to hide them,** click on the little box in the **Channel** column of the relevant data point. When the little box contains a tick, the relevant data point is added to the graph.

To **show a data point in the graph with an offset,** use the right mouse button to click on the data point and choose **Properties...**. In the **Trend data point properties** dialog, you can now determine the **Offset**.

To change the **scaling of the graph,** use the right mouse button to click on the logging and choose **Properties...**. You can also choose logging with the left mouse button and use the following buttons:

Now, the **Trend logging properties** window is opened. The possible settings are described at the beginning of the chapter. The window is subdivided into several sections:

To **scroll on the time axis,** a scroll bar appears below the graph. This scroll bar enables you to scroll forward and backward.

For more information, refer to the following chapters:

- Creating / changing an offline trend definition
- Selecting data points for offline trend logging
- Starting offline trend logging
- Printing in offline trend
- External editing of offline trend logging

3.5.7 Printing in offline trend

When choosing a trend definition, the selected data points appear in the right half of the window:

Use the right mouse button to click on the trend definition you want to print:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

The data points can be printed out in graphic form with the help of an external program, such as Microsoft Excel.
For more information, refer to chapter External editing of online trend logging.

For more information, refer to the following chapters:

- Creating / changing an offline trend definition
- Selecting data points for offline trend logging
- Starting offline trend logging
- Evaluating offline trend logging
- External editing of offline trend logging

3.5.8 External editing of offline trend logging

The values of the data points stored in trend logging can be exported to be further edited by an external program, such as Microsoft Excel.
This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Offline trend** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened. The enclosed TREND.XLS template contains Macro1, for example, which automatically contains an Excel graph with the logged values, enabling you to print them out in Excel format.
Use the right mouse button to click on Popcard and choose **Export to...**. The **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened in the

respective program. Formatings of the template will be adopted and the defined macro started.

For more information, refer to the following chapters:

- Creating / changing an offline trend definition
- Selecting data points for offline trend logging
- Starting offline trend logging
- Evaluating offline trend logging
- Printing in offline trend

3.6 File transfer

3.6.1 Introduction to the "File transfer" application

This application is not contained in all ACS7... software packages. For more information, refer to chapter Licensing.
This application provides for the exchange of files between the central unit and a PC. It enables

- files to be copied from the central unit or its memory card to the PC
- files to be copied from the PC to the memory card inserted in the central unit
- the memory card to be formated

For visualizing the data, a selectable Editor can be started that is suited for use in connection with ASCII files.
Automatic file transfer can be accomplished with the help of the Batchjob software.
Files can only be uploaded or downloaded by central units type OCI600 and OZW10. The other types of central units do not support this function.

For more information, refer to the following chapter:

- Processes in the "File transfer" application

3.6.2 Processes in the "File transfer" application

The following processes are described in this chapter:

- Files directly from the central unit
- Files on the memory card
- Formating memory cards
- Copying and opening files
- Copying files
- Deleting files

3.6.3 Files directly from the central unit

The central units provide certain information in a file. These files are not stored on the memory card but directly in the central unit.

After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on the directory **Files directly from central unit**. The right half of the window shows all files contained in the central unit:

- The directory is automatically uploaded when starting the application if, at that time, a connection to the central unit exists
- The directory is automatically uploaded if the application has already been started, in which case a connection to the central unit is established
- You can again upload the directory at any time by using the right mouse button and clicking on **Files directly from central unit** and then choosing **Upload directory**

After the files are listed in the right half of the window, you can copy files, copy files with the help of an Editor or delete files.

The OCI600 provides the following files:

- **REGx.600:** In these files, you find the current settings and the last 20 events of all controllers x = 1…16 that have been defined in the device directory of the OCI600 central unit
- **OCI_LOGx.600:** In these files, you find the current settings and the last 20 events of the logic inputs x = 1…6 of the OCI600 central unit
- **OCI_DIGx.600:** In these files, you find the current settings and the last 20 events of the digital inputs x = 1…6 of the OCI600 central unit

If no event has as yet occurred on one of the components, the relevant file does not yet exist. When the first event occurs, the OCI600 will automatically create a file.

The OZW10 provides the following files:

- **OZW_SS1.BIL**: This file stores all data that can be displayed on the OZW10. In particular, the file contains all billing data. Depending on the parameter settings for the **Readout cycle**, the OZW10 cyclically uploads these data and makes them available in that file. The data in that file are not current since they represent the data of the last readout cycle.

For more information, refer to the following chapters:

- Files on the memory card
- Formating memory cards
- Copying and opening files
- Copying files
- Deleting files

3.6.4 Files from the memory card

The central units store certain data on the memory card in the central unit. This works only with formated memory cards.

After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on the directory **Files directly from central unit**. The right half of the window shows all files contained in the central unit:

- The directory is automatically uploaded when starting the application if, at that time, a connection to the central unit exists
- The directory is automatically uploaded if the application has already been started, in which case a connection to the central unit is established
- You can again upload the directory at any time by using the right mouse button and clicking on **Files directly from central unit** and then choosing **Upload directory**

After the files are listed in the right half of the window, you can copy copy files with the help of an Editor or delete files.

The OCI600 stores the following files on the memory card:

- ***.TRN:** All files having the extension .TRN may neither be deleted nor overwritten! In these files, the OCI600 stores information that you can access with the "Offline trend" application. For this reason, it makes no sense to copy these files to the PC by means of file transfer.
- ***.SMO:** All files having the extension .SMO may neither be deleted nor overwritten! In these files, the OCI600 stores information that you can access with the "Offline trend" application. For this reason, it makes no sense to copy these files to the PC by means of file transfer.

The OZW10 stores the following files on the memory card:

- **OZW_xyz.BIL**: The OZW10 stores all billing-related data on the memory card when pressing the **FILE** button. First, the OZW… 001.BIL file will be created. Each time the **FILE** button is pressed, a new file is created whereby consecutive file name numbers (002, 003, 004, etc.) will be assigned. This readout mode is normally used when the central unit has not been equipped for remote readout. On the memory card, the billing data of several central units can be collected in order to read them on a local central unit.

For more information, refer to the following chapters:

- Files directly from the central unit
- Formating memory cards
- Copying and opening files
- Copying files
- Deleting files
- The "Offline trend" application

3.6.5 Formating memory cards

To enable central units to download data to the memory card, the memory card must be formated. This concerns files the central units load down to the memory card and information and logged values relating to the offline trend.

After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on directory **Files directly from central unit**. The right half of the window shows all files contained in the central unit:

- The directory is automatically uploaded when starting the application if, at that time, a connection to the central unit exists
- The directory is automatically uploaded if the application has already been started, in which case a connection to the central unit is established
- You can again upload the directory at any time by using the right mouse button and clicking on **Files directly from central unit** and then choosing **Upload directory**. The right half of the window shows all files contained in the central unit. Use the right mouse button to click on **Files on memory card** and choose **Format**. You will

be asked if you really want to format the memory card. During formating, all files on the memory card will be deleted. Prior to formating, check to see if an offline trend is active and stop the offline trend before formating.

For more information, refer to the following chapters:

- Files directly from the central unit
- Files on the memory card
- Copying and opening files
- Copying files
- Deleting files
- The "Offline trend" application

3.6.6 Copying and opening files

You can transfer the files of the central unit or memory card to the PC and open the the files with a configurable program. You configure the program to be started after transfer on the "Tools" menu – **Options...**: The **Options** dialog appears. Under **File transfer** in the **File editor** field, choose the program you want to start (e.g. Microsoft Excel).
After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on the required directory. The right half of the window shows all files contained on the memory card.
Use the right mouse button to click on the file you want to transfer from the central unit or memory card to the PC and choose **Copy and open files...**. The **Save As** dialog appears. Choose the directory and the file name under which the file shall be stored in the PC and continue with **Save**. The file is now transferred from the central unit or memory card to the PC where it will be stored.
After the file has been stored on the PC, a dialog appears where you will be asked if you wish to start the configured Editor. Continue with **Yes** if you want to start the configured Editor. The configured program is started and the program will open the file stored on the PC.
You can always access the file stored on the PC at a later time. Use Windows Explorer to find the file again or to delete it, or open it with an external program, such as Microsoft Excel.

For more information, refer to the following chapters:

- Files directly from the central unit
- Files on the memory card
- Formating memory cards
- Copying files
- Deleting files

3.6.7 Copying files

You can transfer one or several files from the central unit or the memory card to the PC for further handling at a later point in time.
After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on the required directory. The right half of the window shows all files contained in the directory. The right half of the window contains all available files. Here, you can choose the files you want to transfer and store. To choose several files simultaneously:

- Use the left mouse button to click on the first of several successive files. Then, press the Shift key and hold it down. Use the left mouse button to click on the last of the files that you would like to choose. The required files are thus highlighed
- Keep the Ctrl key depressed and choose all required files with the left mouse button. Each file that is clicked will be highlighted

Use the right mouse button to click on one of the selected files and choose **Copy files...**. The **Select a folder** dialog appears. Choose the directory in which the file shall be stored on the PC and continue with **OK**. The files are now transferred from the central unit or memory card to the PC where they are stored under the same name as in the central unit or on the memory card. Note: If the selected directory already contains a file with the same name, it will be overwritten.
You can always access the files stored on the PC at a later point in time. Use Windows Explorer to find the files again or to delete them, or open them with an external program, such as Microsoft Excel.

For more information, refer to the following chapters:

- Files directly from the central unit
- Files on the memory card
- Formating memory cards
- Copying and opening files
- Deleting files

3.6.8 Deleting files

Files on the memory card can be deleted. They cannot be deleted directly from the central unit. Files that have been transferred to and stored on the PC can be deleted with Microsoft Explorer.

To delete the files on the memory cards, proceed as follows:
After starting the "File transfer" application, the left half of the window provides the following directories:

- Files on the memory card
- Files directly from the central unit

Make certain you have established a connection to the plant. Use the left mouse button to click on the required directory. The right half of the window shows all files contained **Files on memory card**. The right half of the window shows all files contained on the memory card.
Use the right mouse button to click on the file you want to delete on the memory card and choose **Delete**. Caution: Do not delete any files having the extension TRN or SMO. These files belong to offline trends on the central unit.
Before deleting the file on the memory card, you will be asked if you really want to delete the file.

For more information, refer to the following chapters:

- Files directly from the central unit
- Files on the memory card
- Formating memory cards
- Copying and opening files
- Copying files

3.7 Parameter settings

3.7.1 Introduction to the "Parameter settings" application

This application enables the settings of the connected devices to be downloaded, uploaded or compared.
The settings can be

- stored as a parameter set
- compared with a stored parameter set
- compared with the standard parameter set
- overwritten with a stored parameter set
- overwritten with the standard parameter set

The parameter sets can be edited either online or offline. The data points of the parameter set can be selected individually. The transmission result of uploading, downloading or comparing is displayed online.
The parameter set can be printed out or exported as an ASCII file.

For more information, refer to the following chapters:

- Processes in the "Parameter settings" application.

3.7.2 Processes in the "Parameter settings" application

The following processes are described in this chapter:

- Creating a new parameter set
- Adapting the parameter set
- Uploading the parameter set
- Downloading a parameter set
- Comparing parameter sets
- Printing in the parameter settings
- External editing of the parameter set

3.7.3 Creating a new parameter set

In addition to the existing standard parameter sets, you can create your own user-defined parameter sets:

- Standard parameter set: Parameter set in which all parameters are set to the default values as supplied
- User-defined parameter set: Parameter set created by yourself:
  - To repeatedly load frequently used parameter settings to devices without having to change each parameter over and over again
  - To store a status of a device on the PC so that the particular status can be reestablished at a later point in time

Procedure:

A. To create a new parameter set, choose from the "Parameter settings" application in the left window the device for which you want to have the new parameter set filed. Position the onscreen pointer in the right window of the application and press the right mouse button. A menu is opened. Choose **New** and then **Parameter set...**. The **Parameter set properties** window is opened. In that window, enter the name of the parameter set. Confirm your entry by choosing the **OK** button.

B. To copy and paste an existing parameter set, choose in the left window the parameter set you want to copy and change (e.g. a standard parameter set or a parameter set of some other device of the same type). Press the left mouse

button, hold it down and drag the parameter set to the device to which you want to transfer the new parameter set. Then, release the left mouse button. If the parameter set does not match the device (different types of devices), you cannot transfer the parameter set to that particular device.

C. To adopt a parameter set from some other plant or PC, choose in the left window the device whose parameter set you want to import. Use the right mouse button to click on the selected device and choose **Import from...**. The **Open export file** dialog appears. Choose the required export file based on the name of the original parameter set or the file name of the export file. The program checks if the parameter set to be imported matches the type of selected device. If the parameter set cannot be imported to that device, an appropriate message will appear.
To export a parameter set, choose in the left window the parameter set to be exported. All user-defined parameter sets (blue) can be exported. Use the right mouse button to click on the selected parameter set and choose **Export to...**. The **Save As** dialog appears. Choose where the parameter set shall be exported to.

The new parameter set is now filed in the directory of the selected device. In the left window, choose the newly generated parameter set in order to check it.
You can now further edit the new parameter set:

- Adapting a parameter set
- Uploading a parameter set
- Downloading a parameter set
- Comparing parameter sets

To delete a parameter set, choose in the left window the relevant parameter set. Use the right mouse button to click on the selected parameter set and choose **Delete**.

For more information, refer to the following chapters:

- Adapting a parameter set
- Uploading a parameter set
- Downloading a parameter set
- Comparing parameter sets
- Printing in the parameter settings
- External editing of the parameter set

3.7.4 Adapting a parameter set

When adapting a parameter set, choose:

- The data points that constitute part of the parameter set. Only the selected data points are actually downloaded to or uploaded by the device
- The values to be assigned to the selected data points

Parameter sets can be adapted offline (with no connection to a device). It is thus possible to produce parameter sets in the office, for example, to be downloaded to the device in the plant at a later point in time.

In the left half of the window, choose the parameter set you want to adapt. Click on **+** / **–** to the left of the parameter set to open or close it. When the parameter set is opened, a number of pages appear showing the data points of the parameter set. When selecting a page with the left mouse button, the data points appear in the right half of the window. The same data point is shown in several columns. The invididual columns have the following meaning:

Column	Description
No.	Consecutive numbering of the data points on a page

Line no.	Referring to the installation instructions of the relevant device
Address	Address of the device to which the data point belongs
Data pointt	Name of the data point
Value	Value of the data point in the parameter set
Unit	Unit of the data point in the parameter set
Transmission result	Result of transmission: OK: Value has successfully been uploaded / downloaded

Selection of data point that shall constitute part of the parameter set

- To the left of the data point, there is an entry box. When clicking on such a box, a tick is added, and when clicking a second time, the tick is removed again. When a data point is marked, it is selected for downloading or uploading. It constitutes part of the parameter set
- To the left of the pages, there is also an entry box. When clicking on such a box, a tick is added, and when clicking a second time, the tick is removed again. When a page is marked, all data points on that page will automatically be marked, or the marking will be removed again
- To the left of the parameter set, there is also an entry box. When clicking on such a box, a tick is added, and when clicking a second time, the tick is removed again. When a parameter is marked, all pages and data points of that parmaeter set will automatically be marked, or the marking will be removed again

Changing the value of the data point in the parameter set

You can change the value of the data point only if you have the required write access, which depends on your user access. The user level can be changed via the "Tools" menu **– Log on...**. Depending on the password the program decides which user level you are authorized to work on. The user levels correspond to those of the respective devices: If, in the program, you work on the enduser level, for instance, you can change the same values as if you were on the enduser level of the respective device.
Only values of user-defined parameter sets can be changed. The data points of standard parameter sets always retain their default values as supplied.

A. You can change the value of a data point in the parameter set offline (with no connection to a device).
   Choose a data point. Press the right mouse button. A menu is opened. From that menu, choose **Properties...**. Then, the **Data point command** window for that data point appears. In that window, you can make the appropriate settings. For this command, you can also double-click on the value or use the following button:

   The change only produces a change of the value in the parameter set. The value has not yet been downloaded to the device. This takes place only when downloading the parameter set.

B. To copy the value offline from one data point to another, first use the right mouse button to click on the data point from which you want to copy the value. Choose **Copy**. Then, use the right mouse button to click on the data point to which you want to assign the copied value. Choose **Paste value**.
   The values can be copied and added only if the two data points are of the same type (e.g. both analog values or switching times). The values will then be transferred to the data points that follow the data point on which **Paste value** was executed.
   This function is very useful in connection with time switch programs, for example.
   The change only produces a change of the value in the parameter set. The value is not yet downloaded to the device. This takes place only when downloading the parameter set.

C. To adopt the value from the device in the plant, you can use uploading the parameter set.

Ensure that the data point is part of the parameer set (must be selected) if it shall be included when downloading or uploading the parameter set.

For more information, refer to the following chapters:

- Creating a new parameter set
- Uploading a parameter set
- Downloading a parameter set
- Comparing parameter sets
- Printing in the parameter settings
- External editing of the parameter set

3.7.5 Uploading a parameter set

If you wish, you can upload the values of a device to a user-defined parameter set. Only values of user-defined parameter sets can be changed. The data points of standard parameter sets always have the default values as supplied. Uploaded are the values of all data points that constitute part of the parameter set. For information about the selection of data points that constitute part of the parameter set, refer to chapter Adapting a parameter set.

Use the right mouse button to click on the parameter set you want to upload from the device and choose **Upload parameter set...**. The **Transmission** window appears, which shows the progress when uploading data points. In the left half of the window, the program automatically jumps from one page to the next and, in the right half of the window, from one data point, which constitues part of the parameter set, to the next. For each data point uploaded, the **Transmission result** column shows whether transmission of the value was successful.

For more information, refer to the following chapters:

- Creating a new parameter set
- Adapting a parameter set
- Downloading a parameter set
- Comparing parameter sets
- Printing in the parameter settings
- External editing of the parameter set

3.7.6 Downloading a parameter set

If you wish, you can download the values of a parameter set to a device. The data points of standard parameter sets always have the default values as supplied. Downloaded are the values of all data points that constitute part of the parameter set. For information about the selection of data points that constitute part of the parameter set, refer to chapter Adapting a parameter set.

Use the right mouse button to click on the parameter set you want to download to the device and choose **Download parameter set...**. The **Transmission** window appears, which shows the progress when downloading the data points. In the left half of the window, the program automatically jumps from one page to the next and, in the right half of the window, from one data point, which constitues part of the parameter set, to the next. For each data point uploaded, the **Transmission result** column shows whether transmission of the value was successful.

For more information, refer to the following chapters:

- Creating a new parameter set
- Adapting a parameter set
- Uploading a parameter set
- Comparing parameter sets

- Printing in the parameter settings
- External editing of the parameter set

3.7.7 Comparing parameter sets

To see if there are differences between parameter sets, you are given the choice of comparing two parameter sets with one another.

Use the right mouse button to click on the parameter set you want to compare and choose **Compare parameter set...**. Dialog **Parameter set selection** is opened, which contains all parameter sets that exist for the device. Choose the parameter set you want to compare and close the dialog by choosing **Select**. Then, window **Differences between "1" and "2"…** is opened.
You can now browse through the individual pages. When choosing a page, the left half of the window shows the data points. The same data point appears in seveal columns. The individual columns have the following meaning:

Column	Description
No.	Different values or statuses of data points in the two parameter sets are identified by a red exclamation mark. If they are identical, a blue equal sign appears. Consecutive numbering of the data points on a page
Line no.	Referring to the installation instructions of the relevant device
Data point	Name of the data point
Value "1"	Value of the data point in parameter set 1
Value "2"	Value of the data point in parameter set 2
Unit:	Unit of the data point in the parameter sets
State "1"	Status of the data point in parameter set 1
State "2"	Status of the data point in parameter set 2

Exporting the comparison, external editing of the comparison
This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Parameter settings** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened.
Choose **Export**. The **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened in the respective program. Formatings of the template will be adopted and the defined macro started.

Printing comparisons

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or use the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. –
	Closing the preview. The window for the preview of the report will be closed.

For more information, refer to the following chapters:

- Creating a new parameter set
- Adapting a parameter set
- Uploading a parameter set
- Downloading a parameter set
- Printing in the parameter settings
- External editing of the parameter set

3.7.8 Printing in the parameter settings

All parameter sets within the directory in the left half of the "Parameter settings" application can be printed out:
Use the right mouse button to click on the directory whose parameter sets you want to print.:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is

	opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

For information about printing parameter set comparisons, refer to chapter Comparing parameter sets.

For more information, refer to the following chapters:

- Creating a new parameter set
- Adapting a parameter set
- Uploading a parameter set
- Downloading a parameter set
- Comparing parameter sets
- External editing of the parameter set

3.7.9 External editing of the parameter set

All parameter sets in a directory in the left half of the window of the "Parameter settings" application can be exported to further edit the data with an external program, such as Microsoft Excel.

This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Parameter settings** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened.
Use the right mouse button to click on the directory from which you want to export the parameter sets and choose **Edit externally...**. The **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened in the respective program. Formatings of the template will be adopted and the defined macro started.

For information about the export of comparisons of two parameter sets, refer to chapter "Comparing parameter sets".

For more information, refer to the following chapters:

- Creating a new parameter set
- Adapting a parameter set
- Uploading a parameter set
- Downloading a parameter set
- Comparing parameter sets
- Printing in the parameter settings

3.8 Commissioning report

3.8.1 Introduction to the "Commissioning report" application

This application is not included in all ACS7… software packages. For more information, refer to chapter Licensing.
This application provides for the logging of setting values of individual devices, groups of selected devices or entire plants.
The data points of the selected devices are stored with their data point designation, value, unit and status.
The commissioning report can be printed out and exported as an ASCII file.

For more information, refer to the following chapter:

- Processes in the "Commissioning report" application.

3.8.2 Processes in the "Commissioning report" application

The following processes are described in this chapter:

- Creating / changing a commissioning definition
- Selecting devices for the commissioning report
- Creating a commissioning report, uploading values
- Evaluating commissioning reports
- Printing commissioning reports
- External editing of commissioning reports

3.8.3 Creating / changing a commissioning definition

A commissioning definition defines the devices in the plant that shall constitute part of the commissioning report. Several commissioning reports can be created for a commissioning definition, typically at different points in time after changes have been made to the plant or to plant sections. During the creation of the commissioning report, the values of all devices selected in the commissioning definition will be uploaded and stored. The stored data can be accessed at any time. At a later point in time, a commissioning report for the same commissioning definition with the same devices can be started again.

Procedure:

A. To create a new commissioning definition, choose from the "Commissioning report" application in the left window the uppermost directory (plant name). Position the onscreen pointer in the right window of the application and press the right mouse button. A menu is opened. Choose **New** – **Commissioning definition...**. Window **Commissioning definition properties** is opened. Under **General**, enter a name for the commissioning definition that describes the plant section as accurately as possible. Confirm the entries by choosing the **OK** button.

B. To copy and paste an existing commissioning definition, choose in the left window the commissioning definition you want to copy and change. Press the left mouse button, hold it down and drag the commissioning definition to the uppermost directory (plant name). Then, release the left mouse button.

To change the name of the commissioning definition, choose in the left window the commissioning definition you want to change. Use the right mouse button to click on the selected commissioning definition and choose **Properties...**. Window **Commissioning definition properties**, where you can change the name, is opened.

Now, you can start selecting devices for the commissioning report.

To delete a commissioning definition, choose in the left window the relevant commissioning definition. Use the right mouse button to click on the selected commissioning definition and choose **Delete**. Caution: All commissioning reports uploaded for the commissioning report will also be deleted.

For more information, refer to the following chapters:

- Selecting devices for the commissioning report
- Creating the commissioning report, uploading values
- Evaluating commissioning reports
- Printing commissioning reports
- External editing of commissioning reports

3.8.4 Selecting devices for the commissioning report

In the left half of the window, choose the commissioning definition for which you want to select devices and for which a commissioning report shall be generated.
Position the onscreen pointer in the right half of the window and choose **New** – **Device...**. The **Device selection** window is opened. Here, you can choose the devices for which a commissioning report shall be generated. To choose several devices simultaneously:

- Use the left mouse button to click on the first of several successive devices. Press the Shift key and hold it down. Now, use the left mouse button to click on the last device you wan to choose. The required devices are thus highlighted
- Keep the Ctrl key depressed and select all required devices with the help of the left mouse button. Each device that is clicked will be highlighted

To add the highlighted devices to the commissioning definition, choose **Add**. After selection, choose **Close** to return to the **Commissioning report** window. In the right half of that window, you will find all devices that have been added.
The same device may be present in several commissioning definitions. And the same device is shown in several columns that provide information about the type of device, bus address, identification of the device and manufacturer number. It is possible to sort by the individual columns.

To remove a device from the commissioning definition, choose in the right half of the **Commissioning report window** the relevant device (multiple selections as described above are possible). Use the right mouse button to click on the selected device and choose **Delete**.

Now, you can create commissioning reports for the selected devices.

For more information, refer to the following chapters:

- Creating / changing a commissioning definition
- Creating a commissioning report, uploading values
- Evaluating commissioning reports
- Printing commissioning reports
- External editing of commissioning reports

3.8.5 Creating a commissioning report, uploading values

When creating the commissioning definition, it was defined which devices shall constitute part of the commissioning report.
During the creation of the commissioning report, the values of all devices selected in the commissioning definition are uploaded and stored.

In the left half of the window, choose the commissioning definition for which you want to create a commissioning report. In the right half of the window, the selected devices are shown.
Position the onscreen pointer in the right half of the window. Press the right mouse button and choose **New** – **Commissioning report...**. Now, the **Transmission** window appears, which shows the progress while uploading the data points. In the left half of the window, the program automatically jumps from one device that constitutes part of the commissioning definition to the next and from page to page and, in the right half of the window, from one data point to the next. The column **No.** is color-coded showing the data points that have already been uploaded:

- **Black:** The value of the data point has already been uploaded
- **Red:** The value of the data point has not yet been uploaded

After the commissioning values are uploaded, you can start evaluating the commissioning report.

For more information, refer to the following chapters:

- Creating / changing a commissioning definition
- Selecting devices for the commissioning report
- Evaluating commissioning reports
- Printing commissioning reports
- External editing of commissioning reports

3.8.6 Evaluating commissioning reports

After the commissioning values are uploaded, you can start evaluating the commissioning report. Navigate through the commissioning report and open or close the devices by clicking on **+** / **-**. Choose the individual pages. The right half of the window shows the data points. The same data point is shown in several columns. The individual columns have the following meaning:

Column	Description
No.	Consecutive numbering of the data points on a page. The data points that have already been uploaded are color-coded: • **Black:** The value of the data point has been uploaded • **Red:** The vlue of the data point has not been uploaded
Line no.	Referring to the installation instructions of the respective device
Address	Address of the device to which the data point belongs
Data point	Name of the data point
Value	Value of the data point
Unit	Unit of the data point

Sorting can be made by individual columns.

You can print the commissioning report or further edit it externally.

For more information, refer to the following chapters:

- Creating / changing a commissioning definition
- Selecting devices for the commissioning report
- Creating a commissioning report, uploading values
- Printing commissioning reports
- External editing of commissioning reports

3.8.7 Printing commissioning reports

Use the right mouse button to click on the commissioning report you want to print:

A. Choose **Print...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start printing or choose the following button:

B. Choose **Print preview...**. The **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to start the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

For more information, refer to the following chapters:

- Creating / changing a commissioning definition
- Selecting devices for the commissioning report
- Creating a commissioning report, uploading values
- Evaluating commissioning reports
- External editing of commissioning reports

3.8.8 External editing of commissioning reports

Commissioning reports can be exported in order to further edit the data with an external program, such as Microsoft Excel.

This function is dependent on the configuration of the program. Choose the "Tools" menu – **Options...**. Under **Export**, you find the template that has been defined for the **Commissioning report** application. On the one hand, this template determines the program to be started for external editing (depending on the type of file, the respective program assigned under Windows will be started, e.g. .XLS -> Microsoft Excel). On the other hand, the template determines the format when the file is opened in the program (you can adapt the template, if you wish). If the template contains macros, it is also possible to define the macro to be started when the exported file is opened.

Use the right mouse button to click on Popcard and choose **Edit externally...**. The **Save As** dialog appears. Choose the directory and a file name under which you want to save the file. After choosing **Save**, the file will be saved and automatically opened in the respective program. Formatings of the template will be adopted and the defined macro started.

For more information, refer to the following chapters:

- Creating / changing a commissioning definition
- Selecting devices for the commissioning report
- Creating a commissioning report, uploading values
- Evaluating commissioning reports
- Printing commissioning reports

4 Menus

4.1 Presentation of menus

Menus contain functions that, possibly, cannot be executed at certain times because other functions must be called up first, or because communication has not yet been opened. Also, certain functions require a license. For more information, refer to chapter Licensing.
Menu items that cannot be executed yet are highlighted in grey.

For more information, refer to the following chapter:

- Main menu

4.2 Main menu

With the ACS..., you can edit one plant at a time. After a new installation has been created, plants do not exist yet and certain menu items are not yet visible and accessible.
As soon as you have created a new plant or selected an existing plant, the available menu items and the tool bar change.

The main menu contains the following menu items:

- The "Plant" menu
- The "Edit" menu
- The "View" menu
- The "Applications" menu
- The "Tools" menu
- The "Window" menu
- The "Help" menu

For more information, refer to the following chapter:

- Presentation of menus

4.3 The "Plant" menu

The **"Plant" menu** contains the following menu items:

- **New**:
  - **Plant...**: For creating a new plant – Creating a plant
  - **Node...**: To add nodes (branches) to the plant view – Editing a plant view
  - **Page / Group...**: To add pages and groups to a user-defined Popcard – Adding a new page / group to the Popcard
  - **Section...**: To add sections to a user-defined Popcard – Adding a new section to Popcard
  - **Separator...**: To add separators to a user-defined Popcard – Adding a new separator to the Popcard, a page or section
  - **Data point...**:
    To add data points to user-defined plant diagrams – Adding a data point to a plant diagram
    To add data points to user-defined Popcards – Adding a new data point to the Popcards, a page or section

To add data points for online trend logging – Selecting data points for online trend logging
To add data points for offline trend logging – Selecting data points for offline trend logging

- **Device...**: To choose devices for which a commissioning report shall be generated – Selecting devices for the commissioning report
- **Popcard...**: To create a new Popcard – Creating a new Popcard
- **Parameter set...**: To create a new parameter set – Creating a new parameter set
- **Online trend definition...**: To make a new definition of data points to be logged in online trend – Creating / changing an online trend definition
- **Trend logging...**: To start a new trend definition – Starting online trend logging
- **Offline trend definition...**: To make a new definition of data points to be logged in offline trend – Creating / changing an offline trend definition
- **Commissioning definition...**: To make a definition which defines the devices of which a commissionign report shall be created – Creating / changing a commissioning definition
- **Commissioning report...**: To create a new commissioning report – Creating a commissioni ng report, upload values
- **Plant diagram...**: To create a new plant diagram – Creating a new plant diagram

- **Open...**: To open an existing plant – Open plant

  You can also open the plant with the following button:
- **Close**: To close the plant that is currently open
- **Delete**: To delete the plant that is currently open – Delete plant

- **Print...**: To print in the active application window.

  Printing can also be started with the following button:
  • Printing a plant diagram
  • Printing in Popcard
  • Printing in online trend
  • Printing in offline trend
  • Printing in the parameter settings
  • Printing commissioning reports
- **Print preview...**: This function provides a preview of the printout in the active application window. For more information, refer to **Print**
- **Print plant report...**: To print the plant structure of the plant view or device view – Printing a device and plant view
- **Preview plant report...**: This function provides a preview of the printout of the plant structure of the plant view or device view. For more information, refer to **Print plant report**
- **Print from file...**: To print and open a preview that was stored in a file:
  • Printing a plant diagram
  • Printing in Popcard
  • Printing in online trend
  • Printing in offline trend
  • Printing in the parameter settings
  • Printing commissioning reports
- **Printer settings...**: The Windows **Print Setup** standard window appears. In this window, you can choose a printer and make printer settings.

- **Edit externally...**: In certain applications, parts can be exported in a text format that is understood by other programs, whereby it is possible to directly start a program that is capable of editing the exported data:

  - External editing of Popcard
  - External editing of online trend logging
  - External editing of offline trend logging
  - External editing of the parameter set
  - External editing of commissioning reports

- **Export to...**: In certain applications, it is possible to export parts to some other plant or PC:
  - Creating a new plant diagram
  - Creating a new Popcard
  - Generating a new parameter set
- **Import from...**: To import the exported data: Refer to **Export to...**

- **Plant properties...**: To change the plant properties (settings for the plant that is open) – Plant properties
- **Edit plant...**: To create and change the user-defined plant view – Editing a plant view

- **Refresh device list**: To upload all information of the devices installed in the plant – Updating a device list
- **Refresh reference data points**: To upload the reference data points that have an impact on the structure of the presented Popcards and the standard plant diagrams shown – Transferring data of the devices in the plant to the PC
- **Connection on**: To establish a connection to the plant – Establishing a connection to the plant

  You can also establish a connection to the plant with the following button:
- **Connection off**: To abort a connection to the plant – Aborting a connection to the plant

  You can also abort the connection to the plant with the following button:

- **Exit**: The ACS... application is closed

- **At the end of the menu,** the program shows you the last 4 plants that have been opened. You can open the required plant – Open plant

4.4 The "Edit" menu

The **Edit** menu contains the following menu items:

- **Cut**: Adds the selected objects to the clipboard.

  For this command, you can also use the following button:
- **Copy**: Copies the selected objects to the clipboard that you can insert at the required location using the **Paste** command.

  For this command, you can also use the following button:
- **Paste**: Inserts the copied or cut objects into the selected location.

  For this command, you can also use the following button:

4.5 The "View" menu

The **View** menu contains the following menu items:

- **Device view**: For changing from the plant view to the device view. It is always only one of the two views that is active at a time. The selection is made for all applications and dialogs of the ACS...
  Navigating with a device view
- **Plant view**: For changing from the device view to the plant view. It is always only one of the two views that is active at a time. The selection is made for all applications and dialogs of the ACS...
  Navigating with a plant view

- **Filter**: Here, you can choose the data points that shall be displayed. By clicking the individual filters, the data points will be selected / deselected. The data points displayed are only those that correspond to the selected filters. The filters are only valid for the active window
  - **All**: When clicking, the entire filter will be selected / deselected
  - **Overview**: Only data points that give an overview
  - **Configuration**: Only data points that appear in the parameter settings
  - **Setpoints**: Only data points that define the control
  - **Control parameter**: Only data points that have an impact on the control behavior
  - **Diagnosis**: Only data points that are required for diagnosing the control behavior
  - **I/O modules**: Only data points that represent the value of inputs or outputs of the devices
  - **End user**: Only data points that the enduser can access on the controller
  - **Commissioning report**: Only data points that appear in the commissioning report
- **Consider dependencies**: Selected in the default setting. If this menu item is not selected, the pages, sections and data points that are dependent on the reference data points will also be displayed. This application is only available when the window is active

- **Tool bar**: Shows and hides the ACS... tool bar
- **Status bar**: Shows and hides the ACS... status bar

4.6 The "Applications" menu

The **Applications** menu contains the following menu items:

- Plant diagram:
  Visualization and remote operation of data points with plant graphic.
- Popcard:
  Visualization and remote operation of all transmitted data points of the connected devices.
- Online trend:
  Acquisition and presentation of the dynamic behavior of selected data points with connection to the plant.
- Offline trend:
  Acquisition and presentation of the dynamic behavior of selected data points with no connection to the plant.
- File transfer:
  Transmission and storage of the files of the central units and memory cards.

- Parameter settings:
  Uploading and editing the setting parameters of a device in tabular form.
- Commissioning report:
  Logging the setting values of individual devices, device groups or the entire plant.

4.7 The "Tools" menu

The **Tools** menu contains the following menu items:

- **Language selection on startup**: To choose whether, on starting the ACS…, you want to have the choice of changing the language – Changing the language
- **Title picture on startup**: To choose whether, on starting the ACS..., the title picture with the copyright information shall appear

- **Unicom...**: Only available to Siemens staff members
- **Connections...**: For configuring the connections used for communicating with the plants – Preparing the connection to a plant

- **Log on...**: For changing the user level by entering the relevant password – Password entry
- **Password...**: Opens a dialog for changing the passwords required for the different user levels. Only the person who logs on as administrator is granted access – Password entry

- **Licensing...**: For adding or removing licenses (functionality) – Overview of licensing

- **Database services**: Here, you can produce a backup copy of the plant file or compress the plant file

- **Options...**: Here, you can:
  - Define the company name that shall appear on labels
  - Define the storage location of plant files – Creating a plant, Opening a plant
  - Define the templates to be used for external editing of data in the different applications:
    - External editing of the Popcard
    - External editing of online trend logging
    - External editing of offline trend logging
    - External editing of a parameter set
    - External editing of commissioning reports
  - Choose the program that shall be started after uploading a file from the central unit – Copying and opening files
  - Choose the application that shall be opened after starting the ACS… – Applications

4.8 The "Window" menu

The **Window** menu contains the following menu items:

- **Cascade**: Arranges all opened windows in a tiled pattern so that the title bars of the individual windows can be seen
- **Arrange all:** Arranges all windows one below the other side by side
- **Arrange symbols**: Arranges all symbols (iconized windows) side by side
- **At the end of the menu,** all opened windows appear. You can move one of the windows in the foreground

4.9 The "Help" menu

The **Help** menu contains the following menu items:

- **Help**: Starts the help function of the ACS.... The same result is obtained when pressing the F1 key in the ACS…
- **Use help**: Shows the contents of the topics required in connection with the help function. The same result is obtained when pressing the F1 key, e.g. with the help function of the ACS…
- **About the ACS...**: Shows in a window the program information about the ACS… In the case of support requests, it is especially the information about the **Version** and **Build** and about the operating system that is important

5 Tips and tricks

5.1 Status window

The status window shows you all important information about the plant. To open the status window, choose the "Window" menu – **State -…**.

5.2 Plant

A plant consists of a central unit and several devices that are connected to the central unit via a field bus (M-bus or LPB).

The program maps a plant in the plant file.

For more information, refer to the following chapter:

- Working with a plant

5.3 Plant file

The information about the individual plants is stored in a plant file which contains:

- Information about the plant (creation, date of creation, description, etc.)
- Information about the central unit or communication interface that shall be used for communicating with the plant, including all required settings
- The device list which contains the devices installed in the plant, including additional information about the devices
- The plant view as defined by the user, provided it has been defined
- All parameter sets created in the "Parameter settings" application
- All trend definitions and loggings created in the "Online trend" and "Offline trend" applications
- All commissioning report definitions and loggings created in the "Commissioning report" application

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

5.4 Device description

A device has dynamic information that is provided in the form of a data point.
To enable the program to identify the data points contained in a device, the ACS… is supplied complete with a static device description of each device.
In the device description, the following information is stored:

- The data points contained in the device
- Whether or not a data point can be uploaded or downloaded
- The possible setting values for a data point and the default value of the data point when the device was supplied
- The way operating pages must be represented in the "Popcard" application
- The picture and data points that shall appear in the "Plant diagram" application

- The data points that can be selected for editing in the different applications

The device descriptions cannot be changed.
If, subsequently, new devices are added to the plant, it can occur that the program does not have the device description required for the specific device. In that case, the device is identified by a grey rectangle with a cross inside. You may be able to access certain data points of the particular device, but not all, and it is also possible that you see certain data points in the ACS... program that do not really exist on the device. In that case, invalid values will be displayed. To get a device description of the latest devices, please contact your Siemens sales office.
Some systems use devices not supplied by Siemens. There are no device descriptions for such devices available. Devices of that kind are identified by a grey rectangle with a cross inside. You may be able to access certain data points of the particular device, but not all, and it is also possible that you see certain data points in the ACS… program that do not really exist on the device. In that case, invalid values will be displayed. Siemens may not be able to provide device descriptions for such devices.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

5.5 Data point

Data points deliver dynamic information about the devices.

After all information about the devices contained in the plant has been transferred to the PC, the relevant devices are stored in the plant file. The program knows all devices installed in the plant. The device types present are automatically identified and also the type of plant diagram selected on the device.
The program delivered also includes a device description of each device. Based on information given in the device description, the program knows automatically:

- The data points contained in a device: These can be selected from the various applications for editing
- Whether the data point can be uploaded or downloaded:
  - Data points that can be downloaded are identified by a **solid circle**
  - Data points that can only be uploaded are identified by an **empty circle**

	Data point: The value can be changed
	Data point: The value cannot be changed
	Reference data point: The value can be changed
	Reference data point: The value cannot be changed

  - A **red circle** or **value – – –** means that the value has not yet been uploaded from the device
  - A **black circle** means that the value has already been uploaded from the device
  - A **blue circle** or a **value in parentheses** means that the user has changed the value on the PC, but it has not yet been transferred to the device

	Red: The data point has not yet been uploaded
	Black: The data point has been uploaded
	Blue: The data point has been changed, but the value has not yet been downloaded to the device

- The possible setting values for a data point and the default value of the data point when the device was supplied. The program automatically provides a dialog for changing data points:
  - In that dialog, the settings that can be made are only those in the permitted setting range
  - When choosing the **OK** button, the adjusted value is transferred to the device
  - The dialog provides the **Default** button: When choosing the button, the value is downloaded to the device with which the device was delivered
  - In the dialog, you can switch to the **Command** page. Depending on the data point, the following commands are provided there:
    - **Write**: Corresponds to the **OK** button on the **Value** page. The adjusted value is transferred to the device
    - **Override**: The value is overwritten for a time predefined in the device. Then, the device will automatically switch back to the initial value
    - **Out of service**: Here, you can activate or deactivate certain data points, such as a holiday period or certain limitations

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

5.6 Delete

Select the element you want to delete. Press the right mouse button and choose **Delete**, or press the **DEL** key.

If you wish, you can also use the following button for this command:

5.7 Copy / Paste

	Copy	**Paste**
Button		
Combination keystrokes	Ctrl+C	Ctrl+V
Context menu	Position the onscreen pointer on the Popcard, trend, data point, text or link you want to copy. Press the right mouse button and choose **Copy**. Position the onscreen pointer on the location where you want to insert the object. Then, press again the right mouse button and choose **Paste**. The copy of the object is now inserted at the required location.	

5.8 Properties

Choose the element whose properties you want to change. Press the right mouse button. A window is opened. In the window, choose **Properties...** Then, the **Properties** window is opened and you can change the properties of the element.

If you wish, you can also use the following button for this command:

5.9 Print

Choose the element you want to print. Press the right mouse button. A window is opened. In that window, choose **Print...**. Then, the **Print** window is opened. Under **Options**, choose the print range and the number of copies. Choose **Start** for printing.

If you wish, you can also use the following button to select printing:

5.10 Print preview

Choose the element of which you want to see a page preview. Press the right mouse button. Choose **Print preview...**. Then, the **Print** dialog is opened. Choose the **Printer** you want to use and the **Pages** you want to print. Choose **Start** to show the preview. The **Preview** window appears:

Button	Function
	Enlargement by a factor of 2
	50 % reduction
	1:1 view
	Printing the current page. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Printing all pages. When you position the onscreen pointer on the button and you press the right mouse button, another window is opened. In that window, you can choose the required printer.
	Sending the pages as a "List & Label" file (.LL) to a recipient.
	Saving the pages as a "List & Label" file (.LL) in a certain directory. Using the "Plant" menu – **Print from file...**, the file can be reopened and printed in the preview window at any time.
	Closing the preview. The window for the preview of the report will be closed.

If, at a later time, you change the address of a device, or you add a new device to the plant, you must revise the central unit's user directory.
For more detailed information about the structure of the user directory in the central units, refer to the documentation of the central unit or the Basic Documentation of the respective system.
If a central unit cannot find a device, it may well be that no bus address has been set on the device, that the set address is already used by some other device, or that the communication from the central unit to the device is interrupted.
For information about setting the device's bus address, refer to the installation instructions of the respective device.
For information about fault tracing in the bus system, refer to the Basic Documentation of the respective system or to the documentation of the central unit.
If the user directory in the central unit has been revised, you must again transfer the data of the devices in the plant to the PC: Choose the "Plant" menu – **Refresh device list**.

For more information, refer to the following chapters:

- The first steps
- Working with connections
- Working with a plant
- Navigating through a plant
- Working with the devices
- Applications

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Siemens Building Technologies Ltd.
HVAC Products
Gubelstrasse 22
CH-6301 Zug
Tel. +41 41-724 24 24
Fax +41 41-724 35 22
www.landisstaefa.com

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